

# AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY, AT No. 136 NASSAU ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. IX., No. 18.]

SATURDAY, APRIL 30, 1853.

[WHOLE No. 889, VOL. XXVI.]

PUBLISHED BY J. H. SCHULTZ & Co., 136 NASSAU ST.

## PRINCIPAL CONTENTS.

Railways in British North America.....	273
"    in Maine.....	273
Coal at the World's Fair.....	275
Accidents on Railroads.....	276
Baltimore and Ohio Railroad.....	277
Agricultural exports from Ohio.....	278
Railway traffic in Great Britain in 1853.....	279
Peru Railroad.....	279
Markets on Wheels.....	280
Cincinnati and Fort Wayne Railroad.....	281
Stock and Money Market.....	281
Portland, Nashua and New York Railroad.....	282
Railways here and abroad.....	282
Scioto and Hocking Valley Railroad.....	283
Journal of Railroad Law.....	283
Evansville, Indianapolis and Cleveland Straight Line railroad.....	283

## American Railroad Journal.

Saturday, April 30, 1853.

### Railways in British North America.

The readers of the *Journal* will recollect that we gave in the No. for 24th July last, a brief sketch of the political and commercial history of Canada, with an allusion to the measures then in progress to invite British capital into the construction of her railways. The remarks then made were suggested in consequence of information of the arrangement between the Hon. Francis Hincks, on behalf of the government of Canada, on the one side, and of the Hon. Wm. Jackson, M.P., for himself and Associates, on the other, by which the latter party became obligated on certain terms to construct the Grand Trunk Line of Canada.

It was clearly foreseen by us, at that time, that the introduction into Canada by Mr. Hincks, of the eminent English Contractors associated with Mr. Jackson would lead to the adoption of those magnificent projects which have been already entered upon by these parties.

Mr. Jackson came to America to consummate contracts, previously agreed upon in England, for building a line of railway in Canada, extending from Montreal to Toronto, and for the construction of the European and North American railway in New Brunswick. Before entering into absolute engagements, Mr. Jackson traversed the whole

country, from Detroit to Halifax, by way of the River De Loup and St. John (entirely through British territory) and made himself master of its topographical and geographical features, and of its commercial capacities and relations. He at once entered into the scheme of a grand system of railways, including in its outline the State of Maine and British North America, securing an uninterrupted line of uniform gauge from Detroit to Montreal, and thence on the most direct route to Halifax, across the State of Maine, irrespective of political divisions, with a branch to Quebec; this branch, to be extended as far as practicable, along the southern shore of the St. Lawrence below Quebec, in case the Home Government should see fit to complete the connection, by extending a line from Miramichi.

In order to give this vast system of railroads, and this immense outlay of capital, its highest capacity for business, it became apparent that the same company must control the outlet of its western trade, by owning the line from Montreal to Portland.

With a view to this result, the charter for the Grand Trunk Line of Canada, contained ample authority to constitute under its charter other lines in Canada, with the right to purchase or lease the Portland road.

It became necessary, therefore, to obtain the needful authority from the Legislature of Maine, to consummate such a contract, and the adoption of a plan by which all the various interests to be affected could be fully secured.

All these matters have been finally arranged and the lines from Detroit to Portland, with the Quebec Branch, are now consolidated into a single company; or, its connections so subjected, as to form a common interest from Detroit to Portland, with a branch line from Port Sarnia to Toronto, making in all about 1,113 miles, as follows:

Detroit to Hamilton.....	220 miles.
Hamilton to Toronto.....	33 "
Toronto to Kingston.....	168 "
Kingston to Montreal.....	162 "
Montreal to Island Pond Junction.....	140 "
Island Pond Junction to Portland.....	150 "
Quebec to Richmond Junction.....	100 "
Port Sarnia to Toronto Junction.....	140 "
Total.....	1113 miles.

As a part of this grand scheme, a bridge is to be built across the St. Lawrence, at Montreal similar to the Union Bridge, at an estimated cost of £1,200,000 sterling, or about \$6,000,000.

It is also understood that the same parties propose to build the European and North American railway, extending their line to Halifax, a distance of some 550 miles, from the point of embranchment of the Portland and Montreal road at Bethel, or at the Danville Junction.

A. T. Galt, Esq., president of the St. Lawrence and Atlantic railroad in Canada, has been in London since December last, clothed with ample power to consummate the necessary contracts for the carrying out of this vast, but most promising work.

No enterprise has yet been suggested on either continent so important to the commerce and the business of the world, as this grand system of railways, by which the United States and the British Provinces are to be indivisibly connected. We have not space in this issue for any further remarks upon this scheme, which will of course attract to itself at once the attention of the business men of Great Britain, the United States, and British North America.

### Railways in Maine.

The following notice of the several leading railway projects of Maine, we extract from the report of ISRAEL D. ANDREWS, Esq., Consul of the United States for Canada and New Brunswick; to Hon. THOS. CORWIN, late Secretary of the Treasury.—This report, it will be remembered, was made in obedience to a resolution of the Senate of the United States, passed March 8th, 1851.

Part IV of the report is devoted exclusively to a review of the Railways and Canals of the United States, which embraces special notices of works in all the States, and of each of the leading lines of every State, being by far the most full and complete history of railways in this country which has ever been offered to the public. Emanating, as it does, from a department of the federal government, the statements made in it, whether statistical or of a geographical or topographical nature, we think may be implicitly relied upon for general accuracy. We shall doubtless continue extracts from this work hereafter, relative to improvements in other states.



Population in 1830, 399,455; in 1840, 501,798; in 1850, 683,169. Area in square miles, 80,000; inhabitants to square mile, 19.44.

With the exception of the States of Maine and Connecticut, the railroad system of New England rests upon Boston as a common centre; by the capital of which it has been mainly constructed. The roads of Maine belong to an independent system, toward which the city of Portland bears the same relation as does Boston to the works already described.

The leading road in Maine forms a part of the line connecting Montreal and Portland, made up of the Atlantic and St. Lawrence in the United States, and the St. Lawrence and Atlantic in Canada. This great work was first proposed to the people of Portland as a means of recovering the position they had lost from the overshadowing influence of their great rival, Boston, and of securing to themselves a portion of the trade of the west, which is now exerting such marked influence in the progress of all our great commercial towns.

Portland possesses some advantages over any other city east of New York, in being nearer to Montreal, the emporium of the Canadas; and in possessing a much more favorable route for a railroad from the Atlantic coast to the St. Lawrence basin, than any other east of the Green Mountain range. The city of Montreal, being accessible from all the great lakes by the largest craft navigating these waters, is the convenient depot for the produce collected upon them. When once on ship-board, this produce may be taken to Montreal at slightly increased rates over those charged to Buffalo, Oswego, or Ogdensburg; but the want of a winter outlet from Montreal to tide water has seriously retarded the growth and prosperity of that city, and prevented her from reaping all the advantages from her connection, by her magnificent canals, with the trade of the west, which she would have secured by a convenient winter outlet. Formerly large amounts of western produce was usually collected there during the autumnal months, and warehoused till spring, and then shipped to England. Shipments by this route involved the necessity of holding produce received late in the season some four or five months. The inconveniences and losses arising from these causes, aided by the repeal of the English corn laws, were among the prominent reasons which led to the commercial arrangements by which colonial produce and merchandise are allowed to pass, in bond, through the territories of the United States. This arrangement had a tendency to divert a large trade from Montreal, and threatened the most disastrous consequences to its trade and prosperity. In view of this state of things, its citizens espoused and prosecuted the railroad to Portland with great energy and zeal. The whole work is far advanced toward completion on both sides of the line. The portion within the United States will be finished during the present year, and the Canadian portion by the 1st of July, 1853. It occupies the shortest practicable route between the St. Lawrence river and the Atlantic coast. Its grades are favorable, nowhere exceeding fifty feet to the mile in the direction of the heavy traffic, or sixty feet on the opposite course. The gauge of the whole road is to be five and a-half feet. As no transshipment will be necessary upon this road, and as its operations can be placed substantially under one management, it is believed that produce can be transported over it at much lower rates than ordinary charges upon railroads.

As before stated, the plan of a railroad from Portland to the St. Lawrence originated in the idea of the possibility of making that city the Atlantic terminus of a portion of the trade of the St. Lawrence and the great Lakes. The city of New York had so long been in the exclusive possession of this trade, as to create the idea that she held it by a sort of natural and unalienable right. When the idea was proposed of turning this trade through a new channel, and of bringing it to the Atlantic coast at a point some four hundred miles northward, the boldness of such a proposition was enough to stagger the credulity of every one who did not feel himself immediately interested in the

result. As soon, however as the prospect was fully unfolded to the people of Portland, its apparent practicability, and the advantages which it promised to secure, took complete possession of the public mind, and the city resolved, single-handed to undertake the construction of a work running, for a considerable portion of its distance, through comparatively unexplored forests: traversing for one hundred miles, at least, the most mountainous and apparently most difficult portion of the eastern States for railroad enterprises; and involving a cost, for the American portion alone, of over five millions of dollars. Repeated attempts had been made to construct a short road, for the accommodation of local traffic, upon the very route since selected for the great line, but without success. The inducements held out were not regarded sufficient to warrant the necessary outlay. It was only by assuming that the people of Portland held within their grasp the trade of one of the most important channels of commerce in the whole country, that they could be induced to make the efforts necessary to success. These efforts and sacrifices have been made. The project is on the eve of realization, and the wisdom in which the scheme was conceived, and the skill and ability displayed in its execution, give the most satisfactory assurance of complete success.

The length of this line, the construction of which devolved upon the people of Portland, is about 160 miles, costing about \$35,000 per mile, or an aggregate of nearly \$6,000,000. The first step in the process of construction was a stock subscription of over \$1,000,000 by the citizens of Portland, aided by some small contributions from towns on the route—for the project was regarded by all others as a mere chimera. This was expended in construction, and was sufficient to open the first division, which, running through an excellent country, at once entered into a lucrative traffic. The city of Portland then obtained, by two several acts of the legislature, permission to pledge its credit to the road to the amount of \$2,000,000. These sums, with some further additions to its stock, furnished a cash capital of over \$3,000,000 to the work. The necessary balance has been raised upon stock subscriptions by contractors and company bonds. In this manner has a city of 20,000 inhabitants secured the construction of a first class railroad, connecting it with the St. Lawrence by the shortest route practicable for a railroad from any of our seaports. The amount actually paid in to the project by the people of Portland will exceed \$50 in cash to each individual, in addition to \$100 to each, represented by the credits that have been extended. It is believed that no better monument exists in this country of the energy and enterprise of our people, and the successful co-operation of one community in the execution of a great enterprise by which all are, relatively speaking, to be equally benefitted. It is an example which cannot be studied and imitated without profit.

Prior to the construction of the Atlantic and St. Lawrence railroad, the only railroad of importance in the State was the Portland Saco and Portsmouth road, which connected its commercial metropolis with the railroad system of Massachusetts. This road was constructed by persons interested in the connecting lines, as a necessary extension of their own. When the city of Portland was reached, their objects were regarded as secured. Any further extension of railroads in Maine was looked upon as of doubtful utility to the interests of the city of Boston, the great centre of the New England system. It was felt that the construction of railroads north and east from Portland, into the interior, might concentrate in that city the trade of the State, which had been almost exclusively enjoyed by the former. This trade was already secured and sufficiently accommodated, as far as Boston was concerned, by the extensive commercial marine of the two States; and the construction of railroads, it was felt, might lessen instead of strengthening the grasp by which she held it. While every other portion of the country was embarking in railroads, the conviction grew up that Maine was not the proper theatre for such enterprises, or, if it were, the people felt their means

unequal to their construction, and it was known that no foreign aid would be had. All such projects, therefore, came to be regarded with comparative indifference. In this condition of the public mind the Atlantic and St. Lawrence scheme was proposed, and with it a system of railroads independent of the rest of the New England States, which should concentrate within her own territory her capital and energies, and which should not only place her in a commanding position in reference to the trade of the west, but, at the same time, place her *en route* of the great line of travel between the Old and New Worlds—a position combining all the advantages of the most favorable connections with the domestic trade of the country and with foreign commerce and travel. These propositions constitute an era in the history of the State. A new life was infused into the public mind, and objects of the highest value held out as the reward of new efforts. The effect upon the policy and the public sentiment of the State has been magical. The whole people felt and saw that they have rights and interests to maintain and vindicate, and that Maine, instead of being a remote and isolated State, removed from participation in projects and schemes which are effecting changes so marvellous upon the face of society, could be brought by her own efforts into the very focus of the great modern movement. A new destiny was opened before her. To this call she has nobly responded, and the State is alive with projects that promise, in a few years, to secure to every portion of it all necessary railroad accommodations, with the results which always follows in their train.

Next in importance to the Atlantic and St. Lawrence railroad is the European and North American project, which is designed to become a part of the great route of travel between the Old World and the New. Under the above title is embraced the line extending from Bangor, Maine, to Halifax, Nova Scotia, taking St. John, New Brunswick, in its route. From Bangor west, the line is to be made up of the Penobscot and Kennebec road, now in progress; the Androscoggin and Kennebec road, with a portion of the Atlantic and St. Lawrence, now in operation. When the whole line shall be completed, it is claimed that the transatlantic travel will pass over this road to and from Halifax, and that through Maine will be the great avenue of travel between Europe and America. Without expressing any opinions as to the soundness of such claims, their correctness is at present assumed, and is made the basis of action on the part of the State, and, to a certain extent, gives character and direction to their railroad enterprises.

Of this great line, that portion extending from Portland to Waterville, a distance of 82 miles, is already provided for by a portion of the Atlantic and St. Lawrence and the Androscoggin and Kennebec railroads. The portion from Waterville to Bangor, something over 60 miles, is in progress. From Bangor to the boundary line of New Brunswick, no definite plan has been agreed upon; although the subject is receiving the careful consideration of the parties having it in charge, and no doubt is expressed that such measures will be taken as shall secure complete and early success to the measure. The New Brunswick portion of it is already provided for by a contract with a company of eminent English contractors, who, it is believed, will also undertake the Nova Scotia division. Of the realization of this scheme at the earliest day, there can be no doubt. The plan meets with as hearty approval in the provinces and in Great Britain as it does in Maine; and on both sides of the water are the results claimed fully acceded. Such being the fact, foreign capital will be certain to supply, and is, indeed, now supplying whatever may be lacking in this country.

Another leading road in Maine, is the Kennebec and Portland, extending from Portland to Augusta, upon the Kennebec river, a distance of over sixty miles. This road it is proposed to extend, to form a junction with the Penobscot and Kennebec, by which it will become a convenient link from Portland east, in the great European and North American line already referred to.



An important line of road is also in progress to extend from Portland to South Berwick, there to form a junction with the Boston and Maine road—thus forming two independent lines of railroads between Portland and Boston. A portion of this line is in operation, and the whole under contract, to be completed at an early day.

A project of considerable importance is also at the present time engrossing the attention of the people of Bangor—that of a railroad following the Penobscot River up to Lincoln, a distance of about 50 miles. As the route is remarkably favorable, and easily within the means of the city of Bangor, its speedy construction may be set down as certain. It is much needed to accommodate the important lumbering interest on that river. From Bangor to Oldtown—a distance of 12 miles—a railroad already exists, which will form a part of the above line.

The projects enumerated embrace a view of all the proposed works in Maine, of especial public interest.

### Coal.

We copy the following interesting article from the recently published Patent office report, relative to coals on exhibition at the World's Fair, last year:

Pit coal, which is now raised in England to the annual amount of more than 35,000,000 tons, and the applications of which are daily becoming more extended, was but little known in England as an article of commerce, prior to the commencement of the thirteenth century. In the year 1238 the first researches for this mineral were commenced on the high ground in the neighborhood of Newcastle-upon-Tyne. These were followed in the year 1330 at the coal field at Colliery, near Lancaster; in 1343 at Merrington and Ferry Hill; and in 1500 the several collieries at Gateshead, Whickham and Tynemouth were first opened. At this period the principal demand was for the use of blacksmiths and lime burners, who appear to have been in the habit of employing this fuel long before it came into anything like general use for household purposes. The mechanical resources of the miner were of a very limited nature, and the principal part of the coal extracted was consequently raised from such situations as afforded considerable facilities for the removal of the water which naturally drains into all subterranean excavations. In the earliest periods of coal mining, this was drawn off through the level or gallery, by which the fuel itself was carried to the surface; but as the demand for the latter became more extensive, the mines were gradually worked at greater depths. This was effected either by extracting the water by an endless chain carrying a series of properly arranged buckets, or by a system of pumps worked by a water wheel. The aid of horses was also frequently called in; but these were only employed in situations where water power could not be obtained; and they were subsequently superseded by wind-mills, which either raised the water by an endless chain, passing over pulleys, or by pumps worked by a due arrangement of cranks. The discovery of the steam engine has however, produced by far the most important revolution in this branch of industry; for, by means of this machine, the working of the mines is not only in a most remarkable degree facilitated, but from the immense demand thus created for fossil fuel, the extraction of coal has become a most important branch of national industry in all those countries which have the good fortune to possess large deposits of this invaluable production.

England and Belgium are, in proportion to their extent, the richest with regard to the coal-fields they contain. In the former country, the coal deposits are estimated at 1-20 of the total superficies of the Kingdom, while in Belgium they are supposed to occupy about 1-24 of the entire surface of the country. In France all the known deposits scarcely occupy 1-200 part of the soil; and all other European states are much poorer still in this respect. Sweden, Norway, Russia, Italy and Greece are almost entirely without these forma-

tions. Bohemia, is in this particular, the richest part of Germany, although its annual productions are far from being considerable. Spain, Portugal, Austria and Poland have likewise their beds of coal; and the mineral is also more or less abundant in India, China, Madagascar, Van Diemen's Land, Borneo and other East India islands, New Holland, and at Conception Bay in Chili.

In Great Britain there are several extensive coal districts, among the most important of which may be named those of Newcastle Lancashire, Derbyshire, and Scotland. The veins are worked by means of shafts and galleries, in the same way that the metallic minerals are extracted from the lodes in which they are found; but as the seams of coal are generally much more extensive than the metallic deposits, and as much larger masses are removed from the interior of the mines, the greatest care is required not only to prevent the crushing together of the workings, but also to introduce a current of air into every part of the colliery, so as to supply the workmen with fresh air for the purpose of respiration, and to prevent the accumulation of the explosive gases which frequently issue from the beds of coal. The very numerous varieties of coal have given rise to distinctions, founded partly on its age and appearance, and partly on its quality.—In all kinds the structure of the wood from which they are supposed to have been formed is obliterated, although partial impressions of plants, indicating their origin, frequently occur. The coals form a more or less compact mass of dark brown or black color, sometimes dull, but more frequently possessing a vitreous lustre, which often exhibits a decided iridescence. Their specific gravity is considerably above that of wood, and their structure decidedly granular. They are always distinctly stratified, and have generally a cleavage at right angles to the plane of deposition. The different laminae of which they are made up are usually in close contact with each other, but are sometimes separated by thin layers of other minerals—such as iron pyrites, carbonate and sulphate of lime, galena, sulphate barites, the soda salts, and still more frequently, by a double carbonate of lime and iron. The fracture of the shining kinds of coal is conchoidal; that of the duller varieties is hackly. Common coal, and particularly that from the newer formations, is frequently observed to be made up of layers of different appearance—the one kind which is black and shining, with a conchoidal fracture, is rich in carbon; whilst the duller varieties are of a brown color.

The composition of the ashes of coal is in a great measure determined by the nature of the rock in the vicinity of the seam from which it is extracted; for, besides containing the inorganic elements originally forming parts of the plants by the decomposition of which the coal has been produced, they will also, to a certain degree, consist of earthly particles, deposited in the pores of the coal by the infiltration of water from the over-lying strata. The chemical composition of coals varies according to their different geological ages, and the localities from which they are obtained; but although they differ considerably in the different amount of their relative constituents, the nature of their ultimate elements is invariably found to be the same. All kinds of coal are essentially composed of carbon, hydrogen and oxygen; but besides yielding a certain portion silicious and earthy residue and of sulphur, they usually afford traces of nitrogen, arising from the multitude of organic bodies, of which they contain the remains.

Among the specimens of coal exhibited, there was anthracite from Tenby, South Wales; from the county of Tipperary, Ireland; and from the western side of the Vale of Neath, near Swansea. This substance is the oldest of all kinds of fossil fuel, and is chiefly found in the transition formation; its structure is perfectly homogeneous; its fracture conchoidal, and its color of a jet black, with a vitreous lustre, which frequently shows a powerful play of colors. This coal contains an extremely large proportion of carbon, with but a small amount of volatile constituents, and is con-

sequently totally unfit for the manufacture of gas, although well adapted for many purposes requiring intensity of heat and durability in the furnace.—From the composition of this fossil being more nearly allied to that of coke than to that of ordinary coal, it is frequently employed in lieu of the former, and is extensively used in iron furnaces, where the hot blast has been adopted.

The per centage composition of two of the above mentioned specimens, as stated by Sir H. T. De la Beche, and Dr. Lyon Playfair, in their first report on coals suited to the steam navy is as follows:—anthracite from the Vale of Neath: carbon 91.69; hydrogen 0.79; and ash 1.50. Anthracite from Tipperary, Ireland: carbon 80.18; hydrogen 2.21; oxygen, traces nitrogen, 0.23; sulphur 6.76, and ash 10.71. The specific gravity of the former specimen was found to be 1.357, and that of the latter 1.590.

Among the specimens from the Welsh coal fields will be observed the Powell's Duffryn, the Aberdare company's Methyr Nixon's, Methyr and Risca black vein, together with coal from the Llangenneck company, whose mines are situated a short distance from the port of Llanelly.—The coals from the above districts are usually characterised by an irregular brilliant fracture, and many portions will be observed to possess a peculiar radiated appearance, seldom noticed in coals coming from other parts of the country. When used under a steam boiler, they are found to light easily, and to blow off steam readily, with the production of but little smoke or soot. This variety of coal which has also a very high evaporating value, is well adapted for the generation of steam, and is largely employed for this purpose in the navy, where its smokeless properties are evidently most useful.

The specific gravity of this class of coals usually varies from 1.29 to 1.35. In order to afford a general idea of the chemical constitution of coals from this part of South Wales, we will select as an example, from the report already quoted, the analysis of the Birch Grove Graigau, which, although one of the best varieties belonging to this class, very fairly represents the average per centage composition of good Welsh coals. The results obtained by the analysis of a fair sample of this product are as follows:—Carbon 90.94, hydrogen 4.23, oxygen 0.94, nitrogen 1.25, sulphur 1.18, and ash 1.41.

From the Lancashire districts there were coal, cannel coal, and coke, the produce of the different seams worked by the Moss Hall coal company, at Ince, near Wigan. The coals from this part of England are of good quality, but are harder, and possess a more cubical fracture than those from the South Wales coal fields: they likewise contain a larger proportion of ash, and give off considerable quantities of smoke when first lighted. The per centage of hydrogen is moreover greater in these coals than in the Welsh varieties, and they are therefore used more frequently in the manufacture of gas. Cannel coal is a smooth almost vitreous substance, with a conchoidal fracture, and brown, black color, and is chiefly employed for gas making, for which its composition eminently adapts it. The cannel coal raised from the above mines is of good quality, and produces an extremely pure and highly illuminating gas. The composition of an average sample of cannel coal is as follows:—Carbon 80.21; hydrogen 6.30; oxygen, sulphur and nitrogen, 8.54, and ash 4.96.

One ton of coal having the above composition, will, on being carefully heated in proper retorts, yield 11,000 cubic feet of gas, capable of affording during its combustion, an amount of light equal to that obtained from 1,150 best spermaceti candles. Coal of this description would be still more largely employed in our gas houses, if the coke obtained from it were of good quality; but this is of such a crumbling nature, and possesses such little durability, as to be of no value except for the burning of lime or similar purposes. The coal from the Derbyshire are distinguished by a peculiar hackly structure, and a tendency to split into long, prismatic fragments. They likewise contain a rather large per centage of ash, and frequently iron py-



rites and white shale.—Among the specimens exhibited from this district are samples from the Butterly Iron Works, near Alfreton, which very fairly represent the fossil fuel of neighborhood, and of which the composition is, according to the official report as follows:—Butterly company's Portland coal—carbon 80.41; hydrogen 4.65; nitrogen 1.59; oxygen 11.26; sulphur 0.36, and ash 1.23. This coal has a specific gravity of 1.301, and affords 60.90 per cent of friable coke.

The coals of Yorkshire have in general a more schistose appearance than those of the last mentioned county, but they are nearly similar in point of composition and evaporative value. From the Staffordshire district some immense pieces were sent to the Exhibition. This variety affords, from the nature of its structure, great facilities for removal in large masses, as was seen from the Denbigh Hall Colliery, near Tipton, and was found at the western entrance of the building.

In this department of the exhibition were also found coals from the Scotch coal fields, and particularly from those in the neighborhood of Edinburgh. Among these were samples from the Dalkeith Colliery, worked on the Midlothian coal seams. This coal is of the variety called "splint" and burns with a long flame and much smoke. It is also good for the purpose of gas making, as may be inferred from the following analysis: Dalkeith coronation seam—carbon 76.94, hydrogen 5.20, nitrogen trace of sulphur, 0.32, oxygen 14.37, ash 3.10.

**Extract from the Report of the Board of Trade on Railways, for the year 1851.**  
**ACCIDENTS, THEIR CAUSES AND MEANS OF PREVENTION.**

On the subject of accidents, it is to be observed that 36 passengers have been returned as killed, and 375 as injured, during the year 1851; these numbers showing a very great increase as compared with the preceding year, when only thirty-two passengers were killed and one hundred and eighty-three injured.

It must not be assumed however, that all of these accidents to passengers were accidents arising from causes beyond their own control, and are therefore to be attributed to the dangers of railway travelling; for upon examining the returns, it appears that during the year 1851 no less than 17 passengers were killed and twenty injured owing to their own misconduct or want of caution, leaving 19 killed and 355 injured as the total number of sufferers from causes beyond their own control.

With respect to the 37 passengers either killed or injured by their own misconduct or want of caution, it appears that no fewer than 24 of these accidents (9 killed, 15 injured) arose from passengers attempting either to get into or out of trains whilst in motion.

On this subject it may be worthy of observation that during the same period (the year 1851) eight servants of railway companies, persons therefore, it may be presumed, in the habit of moving about more or less upon engines and trains, were killed and seven injured from the same cause. Such a statement ought to operate as a caution to passengers not to leave their seats or to attempt to get into carriages while the trains are in motion; for if experienced officials constantly employed upon railways, meet with such frequent disasters from this cause, it is naturally to be expected that inexperienced people, in making similar attempts to get either upon or off trains in motion, will be much more subject to accidents of this character.

Proper caution on the part of the public in this respect would produce a very material diminution in the list of casualties; and it may deserve consideration whether it might not conduce to this notion if notices were posted conspicuously in stations and carriages, warning passengers of the danger to be apprehended from this improper practice.

After deducting the number of those killed or wounded by their own misconduct or want of caution, it would appear that during the year 19 per-

sons were killed, and 355 injured from causes beyond their own control.

This result, giving a total of 374 sufferers, when viewed with reference to the number of passengers conveyed during the year, which amounted to 85,391,095, appears not unsatisfactory, being about 4 in 1,000,000; but when compared with the returns for the preceding year (1850,) it appears that the traffic has not been conducted nearly with the same degree of safety in 1851 as in 1850; for while the number of passengers has increased in the ratio of about 17 per cent, the number of passengers injured by causes beyond their own control, which may be considered as a measure of the relative safety upon railways during different periods, has more than doubled, the ratio of increase being 104 per cent.

It will be found also upon reference to the last annual report of the commissioners of railways, that the casualties in 1850 more than doubled those that occurred in 1849, so that relatively the risk of danger in travelling upon railways seems to have considerably increased.

It is a matter of observation that this increase of accidents has taken place concurrently with the extension of the system of excursion trains, which has been principally developed within the last two years; and it is also to be observed that the number of persons employed upon each mile of railway open for traffic has decreased, as shown by the returns presented to parliament, which are made up for the 30th of June in each year, at which date it may be presumed that the excursion traffic is in full operation.

The average number of persons employed upon all the railways in the United Kingdom open for traffic were, on the

30th June, 1849.....	10.27 per mile.
29th June, 1850.....	9.56 "
30th June, 1851.....	9.49 "

It is, however, right to observe that this reduction in the average number of persons employed may be in some degree attributed to improvement in the management of railways, and to the consideration that the railways which have been opened in late years, have travelled less populous districts than the railways first constructed, and have therefore required fewer persons to conduct the traffic upon them.

It has been thought desirable, with a view to ascertain the causes of these accidents, and to the consideration of the question whether any remedial measures might not be adopted either by parliament or by the companies themselves, to analyze the reports that have been made by the inspecting officers appointed either by the commissioners of railways or by your lordships to inquire into such of these accidents as seemed to call for investigation.

These reports will be found in the appendix, and have reference to 41 accidents, comprising the whole of the 19 passengers before stated to have been killed during the year by causes beyond their own control, and 319 of the 355 before stated, as the whole number of persons injured during the year from like causes.

In addition to these casualties to passengers, 9 servants of railway companies were killed and 4 injured by the same accidents; so that it will appear that the 41 reports which are analyzed in the following observations, embrace all the more important accidents which have occurred during the year upon the railways of the United Kingdom.

These accidents may be classified under two heads.

1. Those which arise from accidental failure of machinery, or from defect in the roadway or works.

2. Those which arise from defects in the establishment and management of the railways.

This head may be further subdivided into—

- A. Inherent defects in the system upon which the traffic is conducted.
- B. Defects in regulations.
- C. Inattention to regulations, or inexperience of servants.
- D. Want of punctuality.

Of the 41 accidents that have been reported upon, two only appear to have been exclusively to the first class, while 25 belong to the second class, and in 14 are involved circumstances falling under both classes.

It is to be observed that accidents very seldom occur upon railways from any one cause, but generally are brought about by a combination of circumstances, each contributing to produce the result.

In 16 of the above 41 accidents were involved circumstances affecting the machinery or works of the railway, and which come therefore under the first head. Two of these only, so far as they could be traced, appear to have been purely accidental, and to fall exclusively under that head; in the other 14 are involved circumstances affecting the establishment and management of railways.

In five of these latter were involved mistakes, either from carelessness or inexperience at what are commonly termed meeting or facing points at junctions or sidings, showing the importance of reducing as far as practicable the number of these useful but otherwise objectionable contrivances. As at present generally constructed, these points are self-acting; that is when not held otherwise by hand, they are always in one position, being retained in it by weight, and the trains then pass over them always in one direction; after being used to turn trains in another direction, they resume their original position by the action of the weights.

It is to be observed that if these points act properly there ought to be but little risk in trains passing over them: but if a stone or any other hard substance should chance to get between the movable points and the fixed rail, the points remain partly open; or if the points from the jerk of a passing train or from any other cause, shift their position, there is great reason to fear that the train may pass partly along one line and partly along the other. This actually happened to three of the cases referred to, producing most dangerous accidents. It is worthy of consideration whether some means should not be provided by which all meeting or facing points which are passed over constantly by passenger trains shall be fixed at all times, the means provided being such that the fastening could not be applied before the points are completely closed. It is believed that means for this purpose might be provided of a very simple and inexpensive nature.

In four of the cases under the first head it appeared that the locomotive stock was deficient, chiefly in consequence of the engines being overtasked; in two of them that the permanent way was out of repair; in one case a bridge had been partly taken down for alteration, without proper precautions having been taken to warn the drivers of coming engines; and in one case the station accommodation was inadequate for the requirements of the traffic which had developed itself upon the railway.

Under the division of what has above been termed the establishment of the railways, including its management and staff of servants, it appears that in 27 cases are involved circumstances which come under the class A., in 13 cases are involved circumstances which come under the class B., in 23 are involved circumstances which come under the class C. Out of the cases 27 involved circumstances which come under the class D. Out of the 27 cases in class A., in which are involved defects that are inherent to the system upon which the traffic is conducted upon railways, it appears that in two cases the luggage placed upon the roof of the carriages had taken fire; in 24 collisions between trains had occurred, and of these nineteen were cases in which trains conveying passengers had come into collision with trains conveying goods; 4 were cases in which passenger trains had come in contact with passenger trains; in one case a goods train with a goods train; and in one case a passenger train with a return engine unaccompanied by a train.

The necessity that exists for trains to traverse railways at different speeds, adapted to the parti-



cular descriptions of traffic conveyed by them, whether passengers, goods or minerals, produces a liability to accident from collision which is inherent in the system upon which the traffic of railways is at present conducted, and from which it must be difficult, if not impossible to free it.

The facts as stated above appear, however, to point to the principal defect of the system, viz: that merchandise and minerals are conveyed over the same lines of rails that are used for the conveyance of passengers.

One remedy for this principal defect of the system, would be the addition to existing railways of lines to be used exclusively for the heavy traffic of goods and minerals. This would mitigate the evil and much reduce the chances of accident of this nature, but would be generally inapplicable on account of the vast expenditure that would be requisite to carry it into effect, and after all it would only partly remove the chances of collision, which would remain to a certain extent, so long as passenger trains traverse railways at different speeds.

Another remedy that suggests itself is, the separation of the two descriptions of traffic goods and passengers, and conducting them at different times. This practice has been adopted to a great extent on many railways, the goods being conveyed as much as possible by night, so as to interfere with the passenger trains to the least practicable extent.

The third remedy that suggests itself is, that all trains, whether goods or passengers, and all engines which traverse railways should be worked to well adjusted time tables, and that punctuality should be enforced. It will be seen upon examining the reports, that in 23 of the accidents as to which inquiries have been instituted, it has been ascertained that the trains have been irregular or unpunctual as to time. In 21 of the collisions it appears that irregularity of the trains was one of the concurrent causes which tended to produce them. Upon consideration of the reports it appears wonderful that more of these accidents do not occur; for it is recorded in some instances goods and mineral trains are sent along railways under the direction of engine drivers, whose only instructions are to proceed to the destination intended for their charge, dropping trucks at stations where necessary, and taking up others, without any instructions at all as to time, but with the necessary understanding that they are to get to their journey's end as best they can, so that they deliver the goods at the required places. This understanding or instruction is, however, subject in most cases to certain general regulations, such as that no train is to follow another within a given time, and that goods trains are to be shunted or moved off the main line when a passenger train is expected within a stated time. Experience, however, shows that these regulations are not sufficient. The interval between trains, as will hereafter be explained, depends upon a number of contingencies, and after all is only to be maintained by the numerous signalmen stationed along the line of the railway, whose responsibility is therefore divided and not by any of the persons employed on the train. The shunting of the trains depends upon the unoccupied siding accommodation being sufficient to contain the train at the place where the operation may be necessary, and which is often found not to be the case.

It would appear, then, that the principal guarantee or safety when the traffic is conducted on this system, is the vigilance and superior intelligence of the drivers and persons to whom is entrusted the conduct of the trains.

In some districts where the goods traffic is of a very fluctuating nature, it may be difficult to arrange so that the hours of arrival and departure of all goods trains shall be advertised and known beforehand with the same exactitude as passenger trains; but it is considered, and is found on many railways, that a large portion of the traffic of this nature is as regular and capable of as much exactitude in respect of time as the ordinary passenger traffic. There can be no valid reason why goods traffic of this regular nature should not be conducted

on the same principle as the regular passenger traffic, with carefully adjusted time tables, and with punctuality. As to other traffic, which is in addition to the regular or ordinary traffic, and is of a more fluctuating nature, including goods and passengers conveyed by what are commonly termed excursion trains, or special goods trains, it may be well questioned whether a general instruction to an engine driver to proceed on his journey to his destination, taken in conjunction with the regulation above alluded to, is a sufficient security to the public that the traffic will be conducted with a due regard to the safety of the travellers conveyed by railway.—*Herapath;*

(To be continued.)

#### Baltimore and Ohio Railroad.

At the last regular monthly meeting of the board of Directors of this company, the late President, Thomas Swann, Esq., begged leave, contrary to the usual custom, to present to the board a statement of the affairs of the company, after the reading of which he formally tendered his resignation of the office which he had filled to the satisfaction of the stockholders, during the preceding four years and upward. In his letter of resignation, Mr. Swann informs the board that his evacuation of the office is in accordance with an announcement which he made to the board upon the acceptance of the high trust reposed in him, that his "services could not be extended beyond the period when an uninterrupted line of communication would be opened from the Chesapeake to the Ohio."

Mr. Swann has devoted his time and attention almost exclusively to the duties of his office, to the neglect of other and private interests. So long as there was anything wanting to complete the great enterprise in which the company was engaged,—an enterprise of nearly a quarter of a century in duration—he labored with the utmost diligence and with consummate ability in the performance of those arduous duties which have, at length resulted in the complete success of the project.

The board then accepted his resignation, and unanimously passed the following resolutions—

*Resolved*, That the Board have learned with deep regret, by the communication of the President just read, his determination to resign the Presidency of this company, but as they feel they have no right to require of him any further services, after the faithful manner in which he has already devoted himself to this company, when it is his desire to be relieved from the duties and labors of the office, they cannot refuse his request, and therefore respectfully accept his resignation.

*Resolved*, That a committee of three be appointed to communicate to Mr. Swann, in behalf of this Board, their deep-felt thanks for the able, faithful, energetic and devoted manner in which he has administered the affairs of this company for the last four years, and accomplished the great enterprise in which they have so long labored—and express to him the sentiments of high respect, regard and esteem entertained toward him by the members of this Board, and their sincere wishes for his continued prosperity and happiness.

The board then proceeded to the election of a President to supply the vacancy occasioned by the resignation of Mr. Swann, when William G. Harrison, Esq., was unanimously elected.

The committee appointed in conformity with the last of the above resolutions, replied to the President's letter of resignation in neat and appropriate language, expressive of the existence of the utmost confidence between the members of the Board and Mr. Swann, regretting that he found it necessary to break up those relations which had so long

and pleasantly existed between them officially, and hoping that prosperity might attend him in the prosecution of his private affairs.

The statement of the condition of the affairs of the company submitted by the President, is substantially as follows:

The total receipts from passengers, mails, and merchandize, for the six months ending on the 31st of March, have been \$814,584 81. The expenses of the road during the same period \$584,940 07.

The interest on the capital invested in the construction of the road west of Cumberland, has been charged to capital—the road not having been reported as in a state for active business until the opening of "Board Tree" Tunnel on the 1st of April:

The board have declared a dividend in stock of three per cent. in accordance with the plan heretofore detailed, payable on and after the 31st. ult.

The earnings of the Washington Branch have been \$201,473 79, and the net revenues, deducting the State's Bonus (say \$32,981 55) for the half year, amount to \$177,223 49. A dividend of five per cent has been declared on the Washington Branch, and a surplus of \$54,128 49 carried to the account of the next half year.

The total expenses of the Branch have been \$50,858 75.

I cannot too strongly invite the attention of the Board the importance of urging upon the Legislature to make some relaxation in the heavy bonus charged on passengers, which would enable the company to reduce the fare on the Washington Branch. I am assured that every disposition exists and has always existed in the Board, to meet the public expectation in this particular. At present the whole odium of the high rates charged upon that road falls upon this company.

The road was opened to Wheeling, as the Board are aware, on the 10th of January last, under embarrassments which it may be unnecessary to refer to in this place. The Chief Engineer announced his readiness to receive the trains on that day, and the Board deemed it best to make the attempt at the earliest practicable moment. The primary object which they had in view was to prepare for the Spring trade, and it was evident that without some effort this could not be accomplished. A road requires to be worked for a few months before it can be brought into successful use; and if the opening had been delayed to the 1st of April, and no trains permitted to pass over it, the same contingencies with which we have been contending for two months past, and which are now in the main subdued, would have been still obstructing our path. These obstacles, however, including the "Board Tree" Tunnel, have not been greater, if indeed as great, as those of the Erie and Pennsylvania railroads, during the first months of their operations.—The Chief Engineer estimated that five hundred tons per day could be passed over the "Board Tree" Tunnel from the period of the opening; but the General Superintendent did not deem it expedient to transport freight at all, until some six weeks had elapsed after the passenger trains had been run through. Had the board awaited the opening of the tunnel before the laying down of the rails between that point and Wheeling, the road would have been still unfinished.

Great allowance is to be made for a new road, traversing such a country as that through which this road passes. The permanent adjustment of the track is a work of time. An increased force is indispensable to be kept constantly on hand to remove slips and clear the way for the daily passage of the trains. Those who may be disposed to cast censure upon the officers of the company for a failure to meet the public expectation in all particulars, must recollect that there is a limit to human power in these matters.

The preparations of the ground for the passenger and tonnage operations of the road, between Howard and Eutaw streets, has been attended with considerable expense. This, it is hoped,



will cease in the course of the present month, as it would not be advisable for the company to do any thing toward the new station on Camden st. until the receipts of the road justify a further expenditure. What has been done already, could not well have been dispensed with.

At the Wheeling station some expenditures is also being incurred.

While these outlays have been large, no more it is believed has been undertaken than was absolutely indispensable for the convenience of the road.—The track in Cecil alley has been a source of vexatious expenditure, owing to the impracticable spirit evinced by persons binding on said alley. The bed of Howard street, it was early discovered, would have failed to answer the purpose of the road, from liability to ice and inundations, and the necessity for more than one track to meet the pressing wants of the service.

Expenditures will have to be incurred, without delay, for temporary buildings at various points along the extended line of the road.

In the annual report of the chief engineer, the third revised estimate of the total cost of the road was stated by him in detail as \$8,075,277. Up to this time the expenditures chargeable to construction, as reported by the treasurer, have exceeded this last amount by \$239,303 00. The final report of this officer has been promised at an early day. My habit has been, as the annual reports will show, to invite the Chief Engineer to make his own statements of matters over which the Board can exercise but a partial control, and that only in checking wasteful expenditures, which it is believed are nowhere chargeable upon the line of this road.—Additional cost may have been sometimes incurred in giving to their bridge masonry and other structures a permanent and durable character; but the experience of the road east of Cumberland shows that the policy which has been adopted is one of true economy in the end. No road in this country has been more securely or substantially built.

The irregularities which prevailed for some time in the working departments of this road, owing to causes over which the President of this company could exercise no control, are now happily removed, and the trains are running with a regularity which may be said to compare favorably with any former period in the history of this work. A system has been adopted for running the engines daily, which will add greatly to the capacity of the road to accommodate the trade during the deficiency of power at present complained of.

It is much to be regretted that the effect of the late "strike" has been to suspend the contracts heretofore made for the supply of the machinery and cars for the increased demands of the road on the opening of the tunnel. On the 1st of April the deficiency of power was severely felt, and this must continue to be the case for some time to come. The Board found themselves in such a situation that they could do nothing to protect the company against these unlooked for delays; and they were compelled to await a recommencement of the work in the various shops having contracts to fill.

The pecuniary loss entailed upon the Company by the effect of the late "strike" has been more serious than the Board might be led to believe.—But for this a dividend of at least 8½ per cent might have been declared.

The machinery heretofore contracted for is now in a state of advancement. Large additions have been made since my estimate of October, to that already ordered. The road is now well supplied with cars, and, with the engines still to be delivered, will present a power as great, it is believed, as that of any other road in this country, and must be competent to do a large business.

The treasurer's exhibit, herewith annexed, after deducting pay rolls for the month of March, the July interest on the sterling bonds, payable in England, say \$100,400, and the dividend due on the Washington Branch, will leave a balance in the treasury of \$573,175 05.

The floating debt applicable to construction, falling due from the 1st of May to the 31st of Decem-

ber, for which the notes of the company have been given, is \$366,353 44. Of this amount \$221,811 28 was incurred for the purchase of iron for sidings, including the five miles near Ellicott's Mills, now being finished, renewal of old rails, &c., &c., much of which still remains upon the line of the road, to be laid down hereafter.

The cost of the iron which has been recently purchased for second track, three thousand tons of which are stipulated to be paid for in the coupon bonds of the company, as well as the cost of laying down the track, will be a tax upon the bonds authorized to be issued for that purpose.

The committee on "Construction and Repairs" have also contracted for seven hundred cars applicable to the coal trade, in addition to their present supply, two hundred of which will be appropriated to the Cumberland Coal and Iron Company under the agreement with them. Two hundred of these cars are to be paid for in cash on delivery, and the balance in November next—allowing full time for the negotiation of the bond.

The engines yet to be provided, with a view to the coal trade, say thirty of the first class, should be contracted for at an early day, now that the shops are again in operation. These it was intended to pay for in the Bonds of the Company.

The situation of the Company will stand thus:

Amount on hand after deducting July interest in sterling bonds, say ..... \$573,175 05  
Bonds on hand applicable to construction, second track, and coal trade, now selling at a limit of 91 per cent..... 1,250,000 00

Total available funds..... \$1,823,175 05

The disposition to be made of the above is as follows:

Floating debt on construction account for which notes have been given, due from the 1st of May to the 31st Dec..... 366,353 44

Amount due on last purchase of iron payable monthly at the rate of about 500 tons, \$250,000 in bonds, and the balance in cash..... 400,000 00

Cost of laying second track, including cross ties, ballast, &c., &c..... 150,000 00

Seven hundred cars for coal trade, 200 to be paid for in cash on delivery and the balance in November..... 350,000 00

Additional engines not yet contracted for, applicable to coal trade, say thirty..... 300,000 00

\$1,566,353 44

Deduct this amount from available funds, will leave a surplus of \$256,821 61.

The notes outstanding for engines and cars, falling due in one, two and three years from the 1st of January, 1853, may be funded as they severally mature, having been classed among the debts of the company, to be so disposed of, in case the revenues of the road should be inadequate to meet them.

During the progress of the road heretofore, I have endeavored to mature its financial plans, without too much dependence on receipts from revenue. If we are to be guided by the flattering exhibit of the past month, this caution may not be found to be necessary. All estimates based upon revenue must be more or less speculative; but having the past before us as a standard, it is now reasonable to presume that the aggregate receipts from the main stem cannot fall short of \$2,400,000; it is also more than probable that they will exceed \$3,000,000; but it is by no means extravagant to suppose that they will touch, if not go beyond, the limits assumed by the General Superintendent in his calculation of \$4,000,000.

With such a basis of credit, then, and the ordinary financial tact that must always be supposed to attach to the head of such a corporation as this, the power cannot be wanting, with the confidence which this road every where inspires, to accomplish all the aid which may be needed from time to time to supply the casual wants of the compa-

ny, and to place the road in the most advantageous position for the accommodation of the largest amount of trade. If the wants of the road should be great, as they no doubt will be, its revenues will also be correspondingly large, and the increase of capital from time to time should be met with a liberal hand, whenever it should be necessary to augment the capacity or extend the profits of the road. The increase of capital, however, while it should be sanctioned with a view to greater capacity and usefulness, should not be permitted, at any time, to interfere with or in any manner control the net revenues which may be earned, and which of right belongs to the stockholders.

#### STATEMENT

Of the affairs of the Baltimore and Ohio Railroad Company, April 12, 1853.

Cost of road west of Cumberland, exclusive of interest, machinery, &c., to the above date inclusive ..... \$8,969,620 71

Add for outstanding bills payable on account of contractors..... \$71,883 00

Bridge superstructures.. 14,919 17

Right of way..... 3,240 00

C. P. Manning, Div. Eng. 55,000 00 \$145,042 17

\$7,114,662 88

Due for coupon bonds of 1855..... \$363,009 92

Due by cash on special deposit at interest..... 120,000 00

Due by Merchant's bank..... 138,077 49

Due by revenue in Wheeling, including outstanding debts there..... 49,620 09

Due by outstanding revenue due by Post Office department and individuals in Baltimore..... 59,467 55

\$730,175 05

Deduct dividend on Washington Branch railroad, \$56,600 00

Due for interest to be remitted to England on Maryland sterling bonds. 100,400 00 157,00 00

\$573,175 05

J. I. ATKINSON, Treasurer.

Office of the Baltimore and Ohio railroad company, April 12, 1853.

Agricultural Exports from Ohio in 1852.

Mr. Mansfield, in the last number of the Railroad Record, has taken pains to ascertain the amount of agricultural products, exported from Ohio in one year, and has given his readers a very interesting article on the subject, from which we gather what follows:

Ohio has in progress of construction the largest extent of railway, and also the largest amount of surplus produce to carry off. No other State compares with her in this respect. Take the following general fact in advance. In 1851 her wheat crop, in round numbers, (which was carried off in 1852) amounted to thirty-five millions of bushels. This was about one-fourth of the entire amount raised in the whole Union. The State contains two millions of people, and their consumption of breadstuffs was, therefore, twenty millions of bushels, and the surplus twenty-three millions. By the actual exports we reach the following results of the year's operations:

Wheat crop of 1851..... 35,000,000 bushels.

Export to 1st. October, 1852.. 19,000,000 "

Consumption..... 12,000,000 "

Remaining on hand..... 3,400,000 "

About ten per cent of the crop of 1851 remained on hand for the next year. From Toledo considerable amounts of wheat and flour, produced in Indiana, are exported. Allow 1,000,000 bushels for this, and the actual export of Ohio, of the crop of 1851, was eighteen millions of bushels. The United States Treasury report shows that the entire export from the United States of wheat and flour to foreign ports was much less than the export of those articles from the State of Ohio! In other words,



Ohio supplies all the breadstuffs exported from the United States to all the world, and a portion of that consumed North and South besides. Nor is this all. Ohio exports more agricultural products and manufactures from agricultural products, than is exported from the whole United States, with the exception only of cotton and tobacco!

"It comes to this, then, that though other Western States send much produce to the Atlantic, yet, if the exports of Ohio were taken out, or destroyed, there would not be one bushel of breadstuffs or pound of meat to send abroad. This, then, settles one point, that Ohio stands alone, in regard to the Union, as the great producer of surpluses for foreign market." The Record gives tables to show the general result, which will be found nearer the exact truth than is usually found in such tables. We copy the Cincinnati table:

## CINCINNATI EXPORTS.

Flour, bbls.....	408,211
Corn, sks.....	51,231
Cheese, boxes.....	150,689
Potatoes, bbls.....	23,844
Seeds, bushels.....	33,321
Oats, sks.....	2,718
Tobacco, hhds.....	15,200
Butter, lbs.....	1,639,000
Beef, bbls.....	33,026
Tallow, lbs.....	200,000
Pork, bbls.....	139,468
Pork, lbs.....	3,912,943
Lard, kegs.....	355,145
Lard Oil, bbls.....	241,830
Whiskey, bbls.....	276,124
Wool, lbs.....	684,783

There are, also, tables of exports from Sandusky, Toledo, Vermillion, Cleveland, Portsmouth, Har-mar, &c. These show nearly the total exports of agricultural products from Ohio, but do not include manufactures or minerals, the amount of which are large. In the tables variable measures and quantities of the same article are reduced to a common standard for convenience. The following is his

## GRAND AGGREGATE.

Flour, bbls.....	2,055,607
Wheat, bush.....	9,392,236
Corn, bush.....	6,193,127
Beef, bbls.....	82,429
Cattle, number.....	67,791
Pork, bbls.....	233,871
Lard, kegs.....	575,493
Hogs, number.....	181,772
Lard Oil, bbls.....	28,126
Tallow, lbs.....	521,258
Tobacco, hhds.....	26,958
Seeds, bush.....	86,411
Butter, lbs.....	3,254,220
Cheese, lbs.....	3,569,355
Whiskey, bbls.....	401,660
Wool, lbs.....	5,914,908
Beans, bbls.....	5,000

Oats, potatoes and other small articles are not included in the above, nor are the manufactures of agricultural products, such as soap, candles, potash, buckets, furniture, &c., the aggregate of which will make several millions in value. The aggregate values in the table, reduced to, and estimated at a medium price, presents the following results:

Flour and wheat.....	\$15,788,216
Corn.....	3,100,000
Beef and Cattle.....	2,394,750
Pork, Lard, Lard Oil and Hogs.....	7,994,290
Whiskey.....	2,850,000
Wool.....	2,100,000
Tobacco.....	1,617,480
Butter, Cheese and Tallow.....	750,000
Seeds.....	172,000
Miscellaneous.....	500,000
Manufactured articles from products of agriculture.....	3,000,000

Aggregate value.....\$40,216,786

This is supposed to be rather below than above the amount. This export is a surplus of our pro-

ductions, above the wants of the State, and therefore, in regard to the State, a clear profit. If we suppose the landed property in Ohio to be worth five hundred millions, which is not far from the value, the net profit on it, shown by this export of surplus, was eight per cent. In addition to this, the farmer and family receive their support, rents, &c., so that the actual profit on money invested in good farming land considerably exceeds eight per cent.

The following is the statement of agricultural exports from the United States for the year ending June 30, 1853:

Products of animals.....	\$7,399,655
Vegetable food.....	16,877,844
Manufactures of soap, candles, leather, boots, shoes and furniture.....	1,734,821
Total.....	\$26,012,320

## Railway Traffic in Great Britain in 1853.

It appears that the gross traffic receipts of railways in the United Kingdom for the year 1852 have amounted to 15,543,610*l.*, being at the rate of 211*l.*, per mile per annum. The returns published weekly show that 15,088,310*l.* was received on the railways during the past year on 6915 miles, including about 200 miles of canal, being an increase of 530,400*l.* in the receipts over the preceding year on 6537 miles of railway, and also an increase of 378 miles in operation. Independent of these railways there are about fifteen new lines in operation, of an aggregate length of 240 miles, the returns of which are not published weekly, but may be estimated at 181,000*l.* In addition to these there are ten other lines of an aggregate length of 183 miles, belonging to old railway companies who do not publish their traffic returns; but it appears from the half yearly reports that the gross receipts on these lines are about 274,300*l.*, making together 455,300*l.* This sum added to the published weekly receipts, shows that the gross traffic receipts on the above railways during the past year amounted to 15,543,610*l.*

With regard to the traffic returns published weekly, they show a progressive increase during the past eleven years. In the year 1842, they amounted to 4,341,781*l.*; in 1843 to 4,842,650*l.*; in 1844 to 5,610,980*l.*; in 1845 to 6,769,230*l.*; in 1846 to 7,689,870*l.*; in 1847 to 8,975,671*l.*; in 1848 to 10,039,000*l.*; in 1849 to 11,013,820*l.*; in 1850 to 12,757,985*l.*; in 1851 to 14,567,910*l.*; and in 1852 to 15,088,310*l.* From this it will appear that the annual increase in the past ten years, being on the average more than one million a year, or during the ten years, is 10,746,529*l.* This increase partly arises from the continual development of the traffic on the trunk lines, and partly from the additional receipts derived from the opening of new lines and branches. The increase of traffic in the year 1842 over that of the preceding year, amounted to 600,870*l.*; in the year 1844 to 768,337*l.*; in 1845 to 1,058,340*l.*; in 1846 to 1,020,650*l.*; in 1847 to 1,285,780*l.*; in 1848 to 1,083,335*l.*; in 1849 to 954,810*l.*; in 1850 to 1,744,168*l.*; in 1851 to 1,809,925*l.*; and in 1852 the increase over the preceding year amounted to 520,400*l.* The great increase of traffic in the year 1850 was due in a great measure to the encouragement given by railway companies to excursion traffic in that year, and the increase in 1851 chiefly to that cause in connexion with the great exhibition. The year 1852 shows a comparative falling off in the increase of traffic as compared to the average of ten preceding years to the amount of 554,252*l.* From this it would appear that the efforts made to force the traffic during the past two years above the ordinary increase had reacted on the traffic of 1852, and thus reduced the expected increase of traffic in that year.

At the end of the year 1842, 1510 miles of railway were open to the public; during the next year an additional length of 56 miles of new railway was opened for traffic; in 1844 a further length of 194 miles was opened; in 1845 263 miles; in 1846 593 miles; in 1847 889 miles; in 1847 975 miles; in 1849 834 miles; in 1850 1093 miles; in

1851 280 miles, and in 1852 the published returns show an additional mileage of 378 miles. So far as the traffic is concerned, it does not appear that there can be much to complain of in respect of the aggregate amount of it on railways since they have been established, and were it not for the adverse interests operating at railway boards, the errors of engineers as to the cost of works and laying out of lines, the letting of large contracts at exorbitant prices by private agreement, excessive payments for land, the continual litigation both in and out of parliament, and the consequent unwarrantable expenditure on capital account, the traffic receipts would have been ample to pay fair dividends on the outlay.

The average traffic receipts per mile show the effects of opening within a period of four or five years so many miles of branch and competing lines of railway; During the year 1842 the gross receipts averaged 311*l.* per mile, in 1843 308*l.* per mile, in 1844 372*l.* per mile, in 1845 346*l.* per mile, in 1846 330*l.* per mile, in 1847 287*l.* per mile, in 1848 256*l.* per mile, in 1849 230*l.* per mile, in 1850 223*l.* per mile, in 1851 223*l.* per mile, and in 1852 223*l.* per mile. This shows a falling off in the traffic per mile of about 30 per cent.; but during the past three years the receipts per mile have not been much under those of 1849.

The reduction in the receipts per mile would not be of much consequence, provided the average cost of constructing the railways was reduced in the same proportion as the traffic per mile—say from 34,000*l.* per mile to 23,000*l.* per mile, and so on in like manner with every additional line to the system, but unfortunately it appears that this would not suit engineers, contractors and other parties, although some cheap railways have been constructed, the following will show that they have not had much effect on the average cost of the whole:—In 1842 the cost of railways then in operation, including working stock, etc., averaged 34,690*l.* per mile; in 1843 36,360*l.*; in 1844 35,670*l.*; in 1845 35,070*l.*; in 1846 31,860*l.*; in 1847 31,700*l.*; in 1848 34,234*l.*; in 1849 35,214*l.*; in 1850 35,229*l.*; in 1851 35,058*l.*; and in 1852 34,630*l.* About 5000 miles of additional railways and branches have been added to the system since 1845, at which time the average cost per mile was 35,070*l.* being only about 440*l.* per mile more than the average cost of 1852. The stationary position of the average cost per mile shows clearly that the continued additions to the capital accounts of old and completed lines of railway, far outweigh all the proposed advantages of constructing thousands of miles of new railways at less cost than the old trunk lines.

The capital expended on the railways of which the traffic is published weekly amounted in July, 1842 to 52,380,100*l.*; in 1843 to 57,685,000*l.*; in 1844 to 63,489,100*l.*; in 1845 to 71,847,000*l.*; in 1846 to 83,165,100*l.*; in 1847 to 109,528,000*l.*; in 1848 to 148,200,000*l.*; in 1849 to 181,000,000*l.*; in 1850 to 219,762,700*l.*; in 1851 to 229,175,200*l.*; and in 1852 to 239,967,453*l.* The expenditure on the new and old lines above mentioned the traffic returns of which are not published weekly, amounts to about 8,626,100*l.*, making with the 239,967,453*l.*, a total of 248,593,553*l.* expended on 7338 miles of railway, being at the rate of 33,870*l.* per mile. Deducting 45 per cent. for working expenses from the gross receipts of 1852, will leave for interest and dividend 8,548,986*l.*, which on the capital expended would be at the rate of 3.44 per cent per annum. It is probable that the amount to be divided among the holders of railway shares, bonds and debentures after the next half yearly meetings in February, will not be less than 4,500,000*l.*—C. E. and Architects Journal.

## Ferry Railroad.

The stockholders of this road have definitely acted upon the proposition to subscribe to the capital stock of the Marietta, the Ohio and Indiana, and the Springfield and Mount Vernon railroad. Upon the question of subscribing to the Marietta road the vote (by stock) stood for, 39,389,



against it 888. For subscribing to the Ohio and Indiana railroad company 46,040; against it 900. For subscribing to the Springfield, Mount Vernon, and Pittsburg railroad company, 44,611; against it 825.

## American Railroad Journal.

Saturday, April 30, 1853.

### Book and Job Printing.

The undersigned have added to the PRINTING ESTABLISHMENT of the "RAILROAD JOURNAL," an extensive OFFICE for BOOK AND JOB PRINTING, which they are now prepared to execute in the BEST manner, and with DISPATCH. They respectfully solicit from RAILROAD COMPANIES, orders for the PRINTING of Exhibits, Time-tables, Circulars, Tickets, &c., &c.

**J. H. SCHULTZ & CO.**

New York April 9, 1853.

### Markets on Wheels.

The food of the people is their first care. The food of mankind for a year is equal in value to the whole movable wealth of the world. To the laboring man, his food is more than all his other expenses; and this must be had, however other things may be cut short. To the people at large, therefore, the price of their food is the measure of their other enjoyments. Whatever makes his day's labor productive of more or better food is a God-send to the poor man. He wants wages to go to market, and a cheap and handy market to go to.

The magnitude of the subject is probably the reason why the Corporation continues in the market business after having given up every other branch of trade to individual management. But, it happens in this case, as in most others, that those who enjoy the monopoly of the public markets, manage the matters for their own advantage rather than for the advantage of the people. It is convenient and profitable for the market folks to have a few great markets; while it would be convenient and profitable for the people to have many small markets, because there would then be a market near to every man's home, and competition among the sellers would make low prices in every market.

Any plan which will bring the consumers of food so near the producers that they can hand over to them the whole price to be paid, will enable the producer to make that price the smallest which will repay the labor of producing and bringing to market.

We have been looking about for some such plan. Various suggestions have been thrown out since the opening of the railroads, which terminate in this city. The letters of a "Westchester Farmer," published in the *Journal of Commerce*, proposed that the producers of food should also convey it to the consumers in the city, by taking into their own hands the freighting business on the railroads, chartering the cars, and paying the companies a minimum price for drawing the cars to and from the market places in the city.

The railroad companies have taken the hint, and not only reduced the price of carrying freight to a lower rate than has heretofore been charged

by sloops and steamers, but they have invited the people of the country to take the freighting business into their own hands. Many are doing so, and more are ready to do so, as soon as they can find a way of running their car loads of food into the market house.

Meanwhile it has occurred to us that the number of different articles of fresh and perishable food, required for the daily use of a family, is a small number; and that the daily wants of a small vicinity might soon be ascertained, so that the requisite supplies, and no more, might be brought every morning at an early hour. But how are those supplies to be brought into every small vicinity? This is the question. Let us look for the answer.

The map of the city is fast becoming a railroad map. Those, who dread the passing of a car along their street, should have resisted the beginning. Having suffered the people to see and ride in one city car, there is no hope of keeping the vulgar intruder out of the streets, most sacred to palaces and private coaches. The Sixth Avenue car is actually taking the gentry of Fifth Avenue and Union Square out of the Broadway omnibuses, and carrying them down to business or amusement. All the enjoined and vetoed city railroads are fore ordained to be made. The courts and the Legislature have left the bars down for the Common Council to proceed in order with this work. The car mania has turned the heads of a large majority of both Boards of the City Fathers; and they will grant the roads to the highest responsible bidders, until no quarter of a mile on the Island will be found without an iron track. These tracks will connect and cross at all the street crossings, so that a car starting from anywhere will run to everywhere, and through everywhere from Kingsbridge to the Battery, and from side to side of the whole town, and there will be turnouts into thousands of places of manufactures and commerce.—Nay, more, all sorts of wheel carriages will be adapted to the gauge and groove of the track, and all things and people will be riding on a rail.—Moreover, the time may come when this borrowing of a ride on the rails of a company will lead to a common city ownership of the tracks.

But what has this net-work of rails to do with a cheap and easy supply of daily food from the country to every neighborhood of the city? We shall see.

The terminus of each of the railroads from the north and east may connect with this net-work of city tracks. Cars loaded with all sorts of daily food, from all parts of the country, ready for family use, may be run into one hundred small market places, even if those places are no more costly than a turnout by the curbstone on the side of a wide street, where these cars may stand from daylight to 8 o'clock in the evening, supplying meats, milk, poultry, fruits, vegetables, butter and eggs to the people, two or three squares around; and then move off to the general station to carry back city supplies to the country from which the food came. Or, each of these market places may be arranged on one or two lots of ground to be provided for the purpose by the sellers of the food.—And, if this plan become common, the city authorities may drop the whole business of the markets, and let the people make the bold experiment of taking care of themselves and their affairs.

And why not have these "markets on wheels?" the same wheels which bring the food from the farmer's waggon in the country; and without a cart or a forestaller bring the produce of the land, under the care of the producer, to the door of the consumer? Let the seller provide the market place, or let the city provide it—in either case the markets should be many and small, and the consumers of food should have all the advantages which can be given them by appropriating to their use the railroads of the Cities and Country.

### Trautwine on Railroad Curves.

We have received a copy of the second edition of Trautwine on Railroad Curves. This, as well as Mr. T.'s work on Calculating Excavations and Embankments, have already attained a wide circulation, and are certainly the best books we have on the subjects.

### Ohio and Mississippi Railroad.

We omitted to state that the article entitled, "The Geographical, Geological and Statistical relations of the Ohio and Mississippi Railroad," published in our last issue, was prepared for the Company by E. D. MANSFIELD, Esq., of Cincinnati.

### North Carolina

*Weldon and Gaston Railroad.*—This road was opened last week, on which occasion there was a great dinner at Norfolk, partaken of by the citizens of North Carolina, Virginia and Maryland. About 350 persons were seated, and general joy was manifested at the acquaintance so happily made by means of railroads.

### Muskingum Valley Railroad Company.

This Company was lately organized, and the stockholders elected the following named gentlemen Directors for the ensuing year: Douglas Putnam, T. W. Ewart, W. S. Nye, John Mills, Beman Gates, M. Clarke and Davis Green.

### Orange and Alexandria Railroad.

The city of Alexandria has subscribed \$50,000 to the Orange and Alexandria railroad, which will complete the road to Gordonsville, its point of junction with the Virginia Central railroad.

### Huntsville and Piqua Railroad.

A convention has just been held, at which it was decided to construct a railway from Huntsville to Piqua. The citizens of Sandusky city, take a deep interest in the project, and as the distance is only about thirty miles, the road will probably be built.

### North Lebanon Railroad.

At an election held in the borough of Lebanon, on Saturday, April 2, by the stockholders of this improvement, the following gentlemen were elected Directors, viz:—John Krause, President; R. W. Coleman, G. D. Coleman, Wm. Coleman, Levi Kline, John Weidman, Jacob Weidle, Benjamin Mooney, D. S. Hammond, Augustus Boyd and C. B. Forney.

The road has been commenced at the northern terminus, in North Lebanon, and it is the determination of the company to finish it at an early day. This road is to extend from North Lebanon to Cornwall, a distance of between five and six miles only; but the building may be set down as an era in the history of Lebanon county. It will pass through the borough and connect with the Lebanon Valley, or any other of the roads spoken of, and one of which must also be commenced before many days.



**Cincinnati and Fort Wayne Railway.**

It will be remembered that in our issue of the 16th inst. there was a report of the consolidation, under the above title, of the Cincinnati and Fort Wayne and the four Mile Valley Railway companies. This road was first organized on the Indiana portion of the line, in February last. The subscriptions of stock already amount to \$400,000, and are rapidly increasing. The Board of Directors are reported to be energetic business men, who are making every effort to have their road completed at the earliest day.

Arrangements are on foot to put the whole line under contract in a few weeks. That portion of the road from Fort Wayne to Winchester, where it crosses the Bellefontaine and Indianapolis road, will be in operation within twelve months—length, 63 miles.

The object of this road is to give Fort Wayne an advantageous and expeditious connection with Cincinnati, and all the great eastern and western routes through Ohio and Indiana. It will prove, virtually, an extension of the Fort Wayne and Chicago Railway, from Fort Wayne to Cincinnati, through a section of Indiana and Ohio which has now no immediate railway communication with a market. The proposed route is from Fort Wayne nearly south to Winchester—the crossing of the Bellefontaine and Indianapolis road; thence a little east of south to Centerville, Indiana, at and near which place it crosses both the Cincinnati and Chicago and the Indiana Central Railway; from Centerville inclining more to the east—the route crosses the Ohio State line near Oxford, and continues a little east of south to Hamilton, whence it is proposed to reach Cincinnati, for a time, at least, either by the Hamilton and Dayton or "Short Line" roads.

This is the general direction of the proposed route; what particular towns it will pass through we are unable to say. A good road on such a route must command an extensive local business. PETER P. BAILEY, Esq., of Fort Wayne, Pa., is the President of the consolidated companies, who are engaged in this project, and he is devoting his best efforts to its ultimate success.

**Hempfield Railroad.**

Tee city council of Philadelphia has subscribed \$500,000 to the stock of the Hempfield railroad.

**Stock and Money Market.**

The stock market continues active, with an advance of prices in many instances, favored with a comparatively easy money market.

The following is the financial statement of the Galena and Chicago railroad.

Consolidated stock, 18,543 shares*	\$1,354,300
Third division stock 6,140 shares†	614,000
10 per cent consolidated bonds	110,500

Full amount of stock	\$2,078,800
7 per cent. unconvertible bonds issued	422,000
Do do do to be issued	178,000

Full amount stock and bonds	\$2,678,800
Length of road to Freeport (miles)	120
Length of branch to Beloit	20

Total	140
Of road costing \$2,678,800, or less than \$20,000 per mile.	

*Amount paid in	\$1,349,741 15
†Amount paid in	682,620 00

Earnings of 92 miles of road, costing \$1,800,000, in operation since May, 1852:

May, 1852..	\$31,728 48	Nov. 1852..	\$46,802 04
June.....	43,225 12	December...	88,705 35
July.....	35,147 19	Jan., 1853..	32,672 31
August.....	40,158 85	February...	25,699 23
September..	56,031 68	March.....	28,226 59
October.....	58,712 00	April.....	35,000 00

Earnings for one year	\$472,109 14
The receipts of the Buffalo and State Line Railroad for March, 1853, were	\$55,489 80
For March, 1852, were	32,000 00

Increase	\$23,489 80
The comparative receipts of the Rochester and Syracuse Railroad, for the first quarter of the year have been:	

	1852.	1853.
January.....	\$45,745 41	\$86,658 76
February.....	50,852 19	75,514 56
March.....	53,233 16	85,640 00

Total	\$149,830 76	\$247,813 32
-------	--------------	--------------

Among the late transactions, said to be chiefly for foreign account, we notice one million convertible bonds of the Belvidere Railroad Company, guaranteed by the Camden and Amboy Railroad and Delaware and Raritan Canal companies, has been perfected through Messrs. Duncan, Sherman & Co., of this City, and C. H. Fisher, Esq., of Philadelphia.

The receipts of the Rochester and Syracuse Road for March, were \$84,500.

The Little Miami Railroad Company's receipts for the week ending April 10, 1853,	
were	\$10,448 31
Receipts for the week ending April 10, 1852.....	7,221 92

Increase 47½ per cent, or.....	\$3,236 39
--------------------------------	------------

The Madison and Indianapolis Railroad company's receipts for the month of March, 1853,	
were	\$47,000 00
Receipts for the month of March, 1851, 40,426 58	

Increase 16 per cent, or.....	\$6,573 42
-------------------------------	------------

The business of this road for the first 3 months of the year is very satisfactory, as will be seen by the following figures—

Receipts.....	\$118,370 33
Expenditures.....	62,175 80

Net Earnings.....	56,394 53
Receipts same time in 1852.....	\$101,634 45

Increase in 1853.....	\$16,934 88
-----------------------	-------------

The net earnings of the last three months are nearly four per cent on the capital of the road.—The expenditures include about \$16,000 for taxes and wood, which should be spread over the entire year.

The collections in the city of Philadelphia, at the office of the Columbia Railway, for the month of March, and for the fiscal year from 30th Nov. last, were as follows:

Amount as per last report.....	\$72,374 58
Amount as pr. month ending March 31, 1853.....	62,594 27

Whole amount since Nov. 30th, 1852..	134,908 75
Same time last year.....	105,680 38

Increase.....	\$29,288 52
---------------	-------------

If this rate of increase is continued throughout the year, a very handsome aggregate will be added to the State revenues.

The Ohio Central Railroad is said to be earning 7 per cent net on its cost so far as completed.—The business of the road for March is shown by the annexed figures—

Passengers.....	\$6,725 61
Freight.....	2,648 21
Mails, &c.....	1,083 39
	\$10,456 21

The following is Mr. PETTIT's response to some enquirer, with reference to the new Coinage law and will be found of general interest:

**PROVISIONS OF THE NEW COINAGE LAW.**

Mint of the United States.

Philadelphia, April 14, 1853.

SIR—In reply to the questions of your letter of yesterday, I have to present the following statements, relative to the operation of the late laws on the operation of the mint:

1. The additional charge, over and above the deductions heretofore customary, will be six cents per \$100, for the preparation of ingots of fine gold. If a deposit be collected in coin, instead of ingots, the additional charge above the former rates will be fifty cents per \$100. The advantage of receiving bars, instead of coins, will be equivalent to forty-four cents on the \$100. So far, therefore as gold is to be employed for export, or for purposes other than speculation, I think it will be found economical, not to speak of other advantages, for depositors to demand payment in bars.

2. You ask whether, if coined at the mint, can the proceeds be paid at the sub-treasurer's office, in this (New York) city. I presume you mean to ask whether the bars can be so paid, although it is improper to use the term coined to express the manufacture of a bar. In reply, I have to say that there is nothing in present laws authorizing the receipt or redemption, elsewhere than at the mint, of its issues, whether of bars or of certificates of deposit. On the organization of the Assay office in your city, it will be competent to deposit there the bars issued from this mint, for which the value will be paid in coin, less half per cent for coinage; or they may be returned at any time to the mint here, for coin, and paid on the terms just mentioned.

3. With regard to silver separated from gold, the mint now pays the full weight in silver dollars. The former practice of paying in gold was, by consent of the Treasury department, changed by the late director, who, after mature reflection, was convinced of its impolicy and irregularity. The dollars paid for silver parted are, of course, at a premium, which the depositor may realize, either by sale in the bullion market, or to the mint at our fixed price of \$1 21 per oz., say 4 per cent premium.

4. Your fourth question is not very clearly understood, but I presume you wish to inquire whether the mint certificates of the net value of deposits must be issued singly, for the total value, or whether we might divide them into convenient sums, say of \$50, \$100, \$500, &c., the aggregate of which should be equal to the sum total. In reply, I have to state that there is no authority for the latter course. A suggestion, asking for such authority, was made in Mr. Corwin's Treasury report of 1851, but not acted on.

5. The charges at the mint would not be varied by reason of any private melting or assay of bullion. Nor will there be any practical difference to depositors between deposits at the proposed assay office at New York, and at the mint.—There will be the same charges and the same advantages at that office as at this mint or at a mint in New York. The difference to the government will be, that instead of procuring coin for the payment of New York depositors, by coinage in that city, it will be necessary, from time to time, to transmit the bullion here for manufacture; but this in no manner affects the depositors.

Any further information or explanations which you may desire, I shall be very happy to furnish.

Very respectfully, your obd't servant,

T. M. PETTIT, Director,



**Portland, Nashua and N. York Railroad.**

A project is already matured for the completion of a line of railroad from Portland, Maine, to this city in a direct route, without passing through Boston. The plan is, to run from Portland, over the York and Cumberland railroad, to the State line of New Hampshire, at Lebanon, thence on the most direct line to Nashua, where it is to connect with the Nashua and Worcester railroad.

The necessary authority to carry this plan into effect, was obtained from the legislature of Maine, at its recent session, and an application is made to the legislature of New Hampshire for the same object.

The legislature of New Hampshire meets for business in June next.

This plan will meet favor in this city, more especially from the New York and New Haven railroad company, and the friends of the "air line" project.

The advantages of the scheme are very clearly and fully stated in an address to the friends of the project, recently issued, signed by Col. C. Q. Clapp, president of the York and Cumberland railroad; extracts from which will be of interest to our readers.

The Portland, Nashua and New York railroad, as proposed, will extend from Portland through Gorham, Buxton, Hollis, Alfred, Springvale, Lebanon, by Little Falls to Rochester, across the Great Falls and Conway, and Cochecho railroad, through Barrington, Epping, across the Portsmouth and Concord railroad to Derry, across the Manchester and Lawrence railroad to Nashua, connecting with the Nashua and Worcester railroad, which leads to Worcester, to a junction with the Worcester and other railroads leading to New York.

By the coalition proposed, a connection with Boston will be secured to the road, first by the way of Great Falls and the Boston and Maine, 2d, by the Cochecho through Dover to Portsmouth, and by the Eastern road, 3rd, by the Manchester and Lawrence railroad to Lawrence, and from thence by the Boston and Maine; all three roads being about equal as to distance from Portland.

Thus the Boston and Maine railroad company, will be necessarily compelled to give the Portland Nashua and New York railroad company, advantages equivalent to an equitable division of fares, or otherwise, the travel will be conducted through such other channels as may be found most conducive to the interests of the road.

The York and Cumberland railroad extends at this moment, and has been run over by cars, to Saco river. The means of the directors as well as the contractor have been severely tested, and but for their individual exertions and responsibility, the progress of the road would have been arrested. During its snail-like advance, offers have been received from competent parties to provide all the means necessary to complete and equip the road, provided the Boston and Maine railroad company would make the arrangement for a division of fares, which would compensate the company for the transportation of passengers and freight.

No other proposition has ever been received from the Boston and Maine railroad company, than that the York and Cumberland passengers should be transported and paid for as way passengers.

Passengers from Portland are charged by the Portsmouth, Saco and Portland and other Boston railroads, two dollars each to Boston, while the way passenger is charged one dollar and eighty cents from Great Falls to Boston, thus allowing the York and Cumberland only twenty cents for the transportation of passengers a distance over 50 miles.

In this connection, it should be observed, that the city of Portland has heretofore taken but little interest in the construction of the York and Cumberland railroad, from the fact that the previous

locations have promised but little remuneration for the capital employed, by way of addition to its business.

The proposed arrangement offers not only an inducement for assistance from Portland, by opening a new avenue to the interior, but by lightening its expense of communication with N. York.

The last suggestion may strike with surprise those individuals who are somewhat antiquated in their knowledge of the business channels of this city. Eight years ago, nineteen twentieths of all the supplies both for domestic consumption and foreign trade, were drawn from Boston, while at the present time, with an internal trade quadrupled, three fourths of the articles are now from N. York.

New York is the great mart for imports to this country, and the Boston and Portland merchants, side by side, make their purchase there; the freight to Boston and Portland being equal, the Portland merchant is enabled to make equal profits by selling at lower rates, to the extent of the diminished charges upon all goods landed, as well as of rents and other domestic expenses.

The enterprise of Portland has been manifested in the prosecution to the completion of the Atlantic and St. Lawrence railroad, and it will not suffer a road so identified with its interest to slumber after the first great object of its ambition shall have been completed.

This change in the business connections of Portland, which have also extended to a very considerable portion of Maine, now require other facilities than can possibly be rendered by the Boston and Maine railroad; and although the simple arrangement for a connection at Great Falls, would have been satisfactory to the York and Cumberland, before the wants of the community were unfolded, it has now ceased to be even an object of desire, beyond the mere interest of that locality.

The directors in view of the above facts, have arrived to the conclusion, that there is no other way of building the road than by adapting it to the public convenience.

The route from Lebanon to Rochester, it is believed, will accomplish that end. By crossing the Great Falls and Conway road, Portland will retain its present trade with New Hampshire, and obtain a very considerable accession, while a different policy would witness the results which followed from railroad facilities being furnished their Vermont customers, of whom few, if any, are now left to the city. The Great Falls and Conway railroad will be benefitted by a free communication with the centre of New Hampshire, and with Maine, and the carriage both of passengers and freight increased thereby.

Within a few feet of the Great Falls and Conway railroad, the proposed road will cross the Cochecho railroad, which now extends from Dover to Winnipiseogee lake, and is laid out to Meredith, to a connection with the Boston, Concord and Montreal railroad. When this road is completed, Meredith, N. H. and Burlington, Vermont, will be at least thirty-five miles nearer to Portland than to Boston. The saving of travel will enable Portland to regain that part of the Vermont and New Hampshire trade, which was lost to it by the R.R. facilities afforded to Boston.

The Portland, Nashua and New York railroad will cross New Hampshire as has been before described, from Lebanon through Rochester to Nashua, which will make a saving of at least 30 miles distance to every citizen of Maine, whose destination is N. Y., or the western states.

The citizens of Saco, Kennebunk, Wells, and Portsmouth, would take the Portsmouth & Concord road to Epping; thence by the proposed road to Nashua, and by the Nashua and Worcester road to Worcester; thence by the Springfield or the Norwich and Worcester, or by the air line from Pomfret, and Norwich by the boat, or N. Haven by land to New York.

The saving of distance is not all, but there is a saving of time also. As an example:—The cars now leave Augusta and Waterville in Maine, at 6 A. M., and arrive at Portland in season for

the half past eight o'clock cars for Boston. Should the Portland and Nashua be constructed, the cars will leave Bangor in Maine, when that road shall be completed, at six o'clock, A. M., beat Augusta and Waterville at 9 o'clock, at Portland at twelve and leaving Portland at half past twelve o'clock, be at Worcester in time for the cars to New York; thus rendering facilities to the traveller who will leave Bangor at six A. M., and arrive in N. York at 12 o'clock at night, by the present arrangements, or a half past 10 o'clock, P. M., by the air line R. R. from Pomfret.

New Hampshire and Maine are thus connected with the commercial metropolis of the U. States, without travelling thirty additional miles to pass through Boston, and will then be relieved from the forced contribution to their hotels and their hacks, and the loss of about three hours, which is now wasted in Boston.

New Hampshire gains more; she is afforded facilities through a central portion of that state, and will thus bring into operation the Portsmouth and Concord railroad, which now languishes for support. Portsmouth will then supply Nashua and Manchester with coal, iron, cotton, lime and lumber, cheaper than can be afforded from Boston, and thus give additional value to their ware houses, and other commercial conveniences.

The Great Falls and Conway, the Cochecho and the Portsmouth and Concord railroads, are not the only ones to be benefitted by the construction of the Portland, Nashua and New York railroad, but the Manchester and Lawrence and the Concord, by and independent of, its connection with the latter road. The Nashua and Worcester will then take its place among the first class roads, and the Nor. and Worcester will be erased from the list of the fancies.

Among the many benefits which would accrue to the traders of New Hampshire and Maine, would be that of direct communication with New York. Valuable freight is now shipped by steamboats from N. York to Fall river, thence changed to the railroad and transported to Boston, and at Boston it is trucked across the city, and again shipped on board the steamboat for Portland; even the merchandise being thus tributary to Boston.

When the Portland, Nashua and New York railroad shall be completed, freight will be shipped to Norwich, and from thence transported by railroad, and without change, to Rochester, Dover, Portsmouth, Saco, Great Falls and Portland.

The consolidation of the two railroads, will find favor with all persons conversant with railroad affairs, not only so far as economy in its administration, but in the convenience of its practical duties.

The name is adopted for its geographical direction, which is found useful to the way traveller.

**Railways Here and Abroad.**

It is not a great many years since every American traveller who went to England wrote home glowing descriptions of the railways there—how the cars went faster—rode easier, ran off the track less frequently—and were in every way superior to ours. But the changes that our rapid growth brings about, seems to have extended to our railway management as well as every thing else. It will be seen, by the following article from the London Times, that Parliament is urged now to take our railroads as models for the English ones:

*From the London Times, March 25.*

**RAILWAY MANAGEMENT.**—Although Railway reform was not enumerated among the prospective topics of the session, it is known that the subject has occupied the active attention of the department charged with this branch of the business. Indeed, there was less chance of its being overlooked from the circumstance that all parties had a common and almost equal interest in bringing it under revision. In most reforms there is an element of either obstructiveness or conservatism which is more or less influential in keeping things as they are, but the existing system of railway management is so unsatisfactory to proprietors as



well as to the public, that there is a universal concurrence in demanding a change. The companies themselves have generally pronounced for amalgamation; the public appears to entertain no very definite views, but to apprehend with considerable reason that if railway companies are left to be their own reformers the last state of things may be worst than the first. In this conjuncture it may be of great use to compare the proceedings of other countries under somewhat similar conditions, and for this purpose we publish elsewhere the most important portion of a report made on the subject of railway management to the State Senate of New York.

It will be seen that these intelligent Americans have gone through very much our own course of dissatisfaction, difficulty and embarrassment.—They have discovered by experience that railways, if left to themselves, cannot be relied upon for a faithful discharge of their duties to the public.—They have concluded, after some hesitation, that competition cannot be looked to in concerns like these for securing the results desirable, and though they are thus reduced to the single alternative of recommending Government control, they see with perfect clearness that any direct interference on the part of the State would be likely, by relieving railway officers of their proper responsibility, to produce more evil than good. In this perplexity they suggest that, while the immediate management of railways should be left to the companies themselves, a rigorous system of State supervision should be exercised throughout the agency of some authority created for that purpose.

To the Board of Commission so constituted are to be confided full powers for insuring that all railway companies perform their legal obligations to the public without exceeding their own privileges, and for exacting "the most accurate returns and statistics," so that "ample and unreserved publicity may be given to all the details of their operations, for the purpose of enabling the community to judge, from the representations of responsible and disinterested authority, of the skill and fidelity of their management." It is proposed, also, that the duty of inquiry into railway accidents should be intrusted to the same board, in order that the public safety may be insured by the prompt application of the best preventives, and the companies protected from misrepresentation by the judgment of an impartial tribunal.

Such is the outline of the conclusions announced in the American report, and it is not improbable that our own legislation may ultimately take some such step as is here recommended.

The railroads of New York will be in a year or two—if indeed they are not now—better managed than any others of the same extent in the whole world.

Their Express trains averaging a regular speed of 45 miles to the hour—their sentries, two to every mile post—their spacious, comfortable cars—their "compound rail"—their thorough system of signals and connected supervision and management—have no parallel on the continent, and are not excelled even in Great Britain.

And much as we complain of the frequency of accidents, the report of the State Engineer shows that last, not a single passenger on them all was killed who kept his seat.—*Albany Journal.*

#### Ohio.

The work on the Scioto and Hocking Valley road is progressing rapidly. The road, it is now said, will be opened to Jackson, forty-four miles from Portsmouth, in June next. This leaves but 81 miles to complete the road to Newark, where it will connect with the Sandusky, Mansfield and Newark railroad, the gauge of both roads being the same, and different from that of any other roads in Ohio, viz: five feet four inches. The road is to be laid with a rail of sixty pounds to the yard;

cost of road per mile \$20,000; total estimated cost, \$2,500,000.

#### Journal of Railroad Law.

##### AN INJUNCTION AGAINST SUBSCRIBING FOR RAILROAD STOCK.

The county commissioners of Philadelphia county having taken the responsibility of subscribing to the stock of the Sunbury and Erie railroad, to the amount of \$2,000,000, the Supreme court of Pennsylvania has arrested their proceedings, for a time at least, by an injunction.

It appears that all the members of the court, viz: Chief Justice Black, and Judges Lewis Laurie, and Woodward, were present at and concurred in the decision, respecting the illegality of the subscription in question, which was submitted for adjudication in the case of *Brown, Randall and others, vs. the Commissioners of Philadelphia county.*

This was a bill in equity by several citizens and taxable inhabitants of the county of Philadelphia, who complained that the defendants, commissioners of the county had agreed to subscribe for twenty thousand shares of capital stock in the Sunbury and Erie railroad company, at one hundred dollars for each share, and to pay for these shares were about to make and issue bonds in the name of the county, to the amount of two millions of dollars, pledging the faith and credit of the county for their payment. The bill avers that the large debt thus created would seriously impair the credit of the county and augment the taxation upon the property of the citizens, and that the whole proceeding, as contemplated by the commissioners, is without any warrant or authority of law. The relief prayed for is an injunction to restrain the defendants from making the subscription, or issuing the bonds referred to.

The answer admits that two of the commissioners (being a majority) have agreed to subscribe for the stock as alleged in the bill, and that they intend to pay for it in bonds of the county, and they are well assured that they have the power by law to do so.

Upon these facts, the plaintiffs moved for a preliminary injunction, and the decision of the court turned mainly upon the construction of certain statutes of Pennsylvania, in reference to the powers of the county commissioners, and of the county board, which last mentioned body is composed of the members for the time being of the Senate and House of Representatives, from the city and county of Philadelphia.

By the laws of Pennsylvania, it is provided that without the consent of the county board no loan can be incurred by the county commissioners, and that such county board must regulate the terms of the loan and make specific appropriations to pay out the proceeds thereof. But this legislative provision was disregarded by the commissioners, on the ground that it had been virtually repealed by the Act of April 15, 1834.

The Act which is said to repeal the one erecting the county board, is the general "Act relating to counties and townships, and county and township officers," passed April 15, 1834, which in its third section provides that counties and townships shall have capacity as bodies corporate for certain enumerated purposes, and by the fourth section declares that "the corporate powers of the several counties and townships shall be exercised by the commissioners and supervisors thereof respective-

ly." It is argued that the words here quoted imply a repeal of the Act of April 10, 1834.

But the court held that the act last quoted was by no means inconsistent with that previously cited, which requires the consent of the county board in case of loans, but that the two Acts may well stand together.

The county board was held not authorised by the Act of 15 April, 1834, "to take the place of the county commissioners but only to supervise them, and consequently the subscription unsanctioned by them is void. Injunction was ordered upon plaintiff's giving \$1,000 security.

#### Indiana.

"The Evansville, Indianapolis and Cleveland Straight Line Railroad."—We notice by the Indianapolis papers that articles of association have been entered into, under the general railroad law of the state of Indiana, by Oliver H. Smith, late president of the Indianapolis and Bellefontaine R. R. company. Willard Campbell, Esq., of Evansville, and their associates, with a capital of \$4,000,000, under the above name, to construct a straight line railroad, from Evansville, on the Ohio river, by way of Indianapolis to Union, the only points made in the line. The object of the company is to extend the through line from Cleveland, (about being completed to Union) on the Ohio gauge, from that point, on the same gauge, avoiding reshipments through the centre and capital of the state of Indiana, to Evansville, the south-western city of the state, on the Ohio river, about 350 miles below Cincinnati, 250 miles below Madison, and 300 miles below Louisville. The length of the line from Cleveland to Evansville will be only 420 miles. The length of the line proposed to be built by this company, will be about 225 miles, running through the heart of the state of Indiana lengthwise, and connecting at Evansville with the business and travel of the Ohio river, the Wabash and Erie canal, and the Nashville and Southern railroads. The great importance of this road will be seen at once by reference to the map, while the character of the men engaged, is a strong guarantee of the success of the enterprise.

#### NEW YORK

##### Lubricating Oil Manufacturing Co.

12 BROADWAY,

PROPRIETORS AND MANUFACTURERS OF

DEVLAN'S PATENT LUBRICATING OIL,

FOR ALL KINDS OF MACHINERY AND RAILROADS.

THIS OIL is now extensively used on the principal Railroads in Pennsylvania, New York and N. E. States. It runs machinery with less friction, thereby enabling the consumer to accomplish more with the same motive power, and save their machinery from unnecessary wear. It is entirely free from Gum, and will cleanse and destroy all old Gum that has accumulated upon Slides and Journals, by the use of bad oil. It will wear longer than Spem, and is from thirty to forty cents a gallon cheaper, which makes a great saving to the consumer.

ap90 8m

#### Krupp's

##### BEST CAST STEEL.

Which obtained the Council Medal at the London Exhibition in 1861.

Warranted unapproachable as to Quality and Size.

PLATERS and other Cast-Steel Rollers, of any dimensions not exceeding six feet long by eighteen inches diameter. Piston Rods and Shafts for Steam Engines. Railway and other Axles, Cranks, Springs and Tyres. Cannon, Rifle and Gun Barrels. Mint and other Rolling Mills.

—Particularly applicable for—

Engravers' Transfer Rollers and Plates; Die-cutters; Tool-makers; Road and Locomotive; Dredging Chains, etc., etc.

Manufactured at Essen, in Rheland, Prussia, by FRANK KRUPP Agents, THOMAS PROSSER & SON, 25 Fleet Street, New York

ap90



## BRIDGEWATER PAINT, FOR WOOD, BRICK AND IRON BUILDINGS, Steam and Canal Boats, RAILROAD CARS, & C.

OR  
For all kinds of Work above and under water.  
**PERFECTLY SPARK AND CINDER PROOF,**  
On Roofs of Houses, and Decks of Steamers, Railroad and  
other Bridges.  
For sale in Bbls., 300 and 400 lbs., and Kegs, 25, 50 and 100 lbs.  
**R. BOGERT, General Agent,**  
Depot: 125 Pearl and 78 Beaver sts., New York.

## CLARK & JESSUP, GENERAL RAILROAD SUPPLY AGENTS, AND FORWARDING MERCHANTS,

ALSO,  
Agents for the Saugatuck Iron works,  
NO. 38 EXCHANGE PLACE,  
**NEW YORK.**

OFFER their services for the Purchase, Inspection and For-  
warding of Railroad Iron, Chairs, Machinery, etc. Orders  
are invited for Locomotive and Stationary Engines, Passenger  
and Freight Cars, Machinists' Tools, Spikes, Chairs, Switches,  
Frogs, etc.; also, Locomotive Tires, BO, or Lowmoor pattern,  
which will be executed at Manufacturers' prices.  
Engine Waste, Cotton and Hemp Packing, Bell-rope, Car and  
Switch Locks, Locomotive Lamps, etc., etc., constantly on hand.

REFERENCES:  
Rogers, Ketchum & Grosvenor,  
Phelps, Dodge & Co.,  
Ketchum, Rogers & Bement,  
N. L. & G. Griswold,  
Illinois Central R. R. Co., and others,  
Reed, Chadwick & Dexter,  
E. Chadwick, Esq., Treasurer of the  
Merimack Mills,  
New York, April 30, 1853.

**Railroad Iron.**  
3000 TONS superior quality, delivering from April for-  
ward, with 5 to 600 tons per month, for sale by  
NAYLOR & CO.,  
124t 99 & 101 John street.

**Wm. Swinburne,**  
LOCOMOTIVE ENGINE BUILDER, Paterson,  
N. J., is prepared to execute orders for Freight  
and Passenger Engines; also, Tenders, Wheels, Ax-  
les, Boilers and Railway Machinery in general, with  
all the modern improvements, etc. 61t

## To Contractors.

**SEALED PROPOSALS** will be received at the  
Engineer's office of the Lexington and Big  
Sandy Railroad, in Mt. Sterling, Ky., until Aug-  
10th, at sun down for the graduation and masonry  
of the whole of said Railroad, a distance of 125  
miles. Bids will be received for any number of  
sections, the company reserving the right to reject  
all propositions, if none are satisfactory.

Propositions are also invited by contractors of  
ability, for the whole road.

This road runs through some of the finest por-  
tions of the State, the facilities for the supplies of  
every kind being very abundant.

Plans and specifications may be seen at the  
office after July 1st.

**J. B. WESTBROOK, Chief Engineer.**  
Portland, April 9, 1853.

## A. Whitney & Son, PHILADELPHIA, PA.,

MANUFACTURERS of Chilled Railroad Wheels  
for Cars and Locomotives. Also furnish Wheels  
fitted complete on best English and American Rolled  
and American Hammered Axes. 31t

## Dudley B. Fuller & Co., IRON COMMISSION MERCHANTS, No. 139 GREENWICH STREET, NEW YORK.

## Blake & Parkin, MEADOW STEEL WORKS, SHEFFIELD,

INVENTORS OF  
**CORE-ANNEAL CAST STEEL,**  
A most Important Improvement in CAST STEEL,  
originating with B. & P., for SCREW TAPS, PIS-  
TON RODS, ENGRAVERS to CALICO PRINT-  
ERS, SILVER and GOLD ROLLERS, etc., etc.,  
warranted to harden by ordinary process without  
breaking, being soft in the centre to any required di-  
ameter, and hard to any specified depth from the out-  
side.

**HARD CENTRE CAST STEEL,**  
For DIES, LATHE CENTRES, MINT PUR-  
POSES, etc., etc., warranted to harden the Inside  
without breaking, (the outside remaining soft.)

**HARD AND SOFT SURFACE CAST STEEL,**  
In Bars and Sheets, hard on one or both sides, and  
soft in the centre; or soft on one or both sides, and  
hard in the centre, and adapted for a variety of pur-  
poses, as MACHINE KNIVES, SLIDE BARS,  
PLOW KNIVES, PLANING KNIVES, ROLLER  
BARS for Beating Engines for Paper Makers, etc.

This peculiar Steel is quite SOLID, and it is  
quite malleable, and draws down under the Hammer,  
still retaining the difference of hardness. When hard-  
ened, the hard part is left very hard, while the soft is  
left just harder than common iron.

## THE REPORT OF THE JURY OF THE "EXHIBITION OF ALL NATIONS."

Class 21, Page 486:  
"The attention of the Jury was particularly called  
to one novelty exhibited by Messrs. BLAKE & PAR-  
KIN, of SHEFFIELD, consisting of the union of  
Two qualities of Cast Steel, hard and soft, in the same  
article; manufactured with much skill, they have no  
reason to doubt that the process is peculiar to the  
Exhibitors."

## A PRIZE MEDAL WAS AWARDED TO MESSRS. BLAKE & PARKIN.

N. B.—The Inventors mark all their Goods with  
their CORPORATE MARK—X. L. ENT.

Also, Cast Steel, German and Spring Steel, war-  
ranted Cast Steel Files, Saws, etc.  
**GEO. SANDERSON,**  
248 Pearl st., N. Y.

February 9, 1853.

## Wilkinson's EXPLOSIVE RAILWAY SIGNAL,

For sale by  
**BRIDGES & BROTHER,**  
64 COURTLANDT STREET.

THE EXPLOSIVE RAILWAY SIGNALS are similar to  
those used in England, and from experience are found to  
be much better. They are so constructed that the movement of  
an Engine over them at any speed, will cause an explosion that  
cannot be mistaken. In the night, from this same cause, there  
will be a bright flash, which will be so vivid that it cannot be  
passed unnoticed.

THIS WILL BE FOUND ONE MORE PREVENTIVE  
OF COLLISION. It is often the case that during a fog or snow  
storm, a train cannot be warned of its danger by a flag or lantern,  
and in such instances they are invaluable.

They are impervious to water, and will keep their explosive  
property any number of years. They can be handled and carried  
with safety, it requiring a heavy blow to explode them.  
January, 20, 1853.

## Superior Cast Iron Gas and Water Pipes.

THE Subscriber is prepared to contract for the sup-  
ply of CAST IRON PIPES required by Gas or  
Water Companies, Corporations, etc., delivered in any  
Seaport in the Union, on reasonable terms. These  
Pipes are cast on the most approved principle by the  
best Founders in Scotland, from a superior quality  
of Pig Iron remelted, are guaranteed to resist a pres-  
sure of 300 lbs. to the square inch, or greater if neces-  
sary, and to be soft enough to drill easily and freely.  
Full information regarding price, and references to  
parties in the United States now using the Pipes, can  
be obtained on application to the Agent in New York.

**WILLIAM ROY, Junr.,**  
21 Renfield st., Glasgow,  
Scotland.

**J. M. EADIE, Agent,**  
28 Front st., New York. 1y50

## \$300,000 PERU and INDIANAPOLIS RAILROAD FIRST MORTGAGE CONVERTIBLE SEVEN PER CENT BONDS.

We offer for sale, at reasonable rates, \$300,000  
of the 7 per cent 1st Mortgage Convertible Bonds  
of the Peru and Indianapolis Railroad Company.

Forty miles of this road, lying between Indian-  
apolis and Tipton, is now completed and in opera-  
tion. The Madison Road operates the same. The  
residue of the line to Peru, 32 miles, will be com-  
pleted and in operation by the 1st of November  
next.

The entire Road will cost, when completed and  
equipped, about \$1,200,000.

The available stock subscription is 829,000.  
The mortgage debt is but \$600,000 in all, the above  
being a part thereof. The Road owes no other  
debt.

This Road is advantageously located, connect-  
ing at Indianapolis with the Madison road (of  
which it is a direct extension northwardly) and the  
other roads there centering.

At Peru it connects or intersects with the Wa-  
bash and Erie Canal, and it will shortly be ex-  
tended to the Fort Wayne and Chicago Road at  
Warsaw.

It traverses a region of great fertility and pro-  
ductiveness, having no other outlet to a market.  
Its local business alone, will, it is thought, yield a  
handsome support.

Pamphlet exhibits, with maps of the work, and  
any other more detailed information desired, will  
be furnished on application to the subscribers.—  
New York, April 7, 1853.

**WINSLOW, LANIER & Co., No. 52 Wall-st.**

## To Surveyors and Engineers.

A MAN of science, and thoroughly acquainted  
with surveying and civil engineering, wishes  
a situation with some good practical engineer.  
Address "H. W." this office. 3\*12

## Iron for Machinists. THE SUBSCRIBERS, IMPORTERS AND DEALERS IN IRON AND STEEL,

HAVE constantly on hand a good assortment of  
Iron and Steel, expressly adapted to the use of  
LOCOMOTIVE AND CAR BUILDERS,  
AND MACHINISTS GENERALLY.

**ELLIOTT & HOLDEN,**  
Feb. 16, 1853. 90 Reekman st., N. Y.

## Fire Bricks.

SCOTCH Patent—for sale in lots to suit purchas-  
ers, by **G. O. ROBERTSON,**  
135 Water street, corner of Pine,  
November 19, 1852. New York.

## Wrought Iron Wheels!

THE SUBSCRIBER, Sole Agent in the United  
States for the Union Foundry in England, is  
prepared to take orders for, and to furnish promptly  
Wrought Iron Wheels at a low cost, of a superior  
quality, for Railway Cars. These wheels are ex-  
tensively used in England, and are already in use  
on several important railroads in America. Sam-  
ples of them can be seen at 24 Broadway, New  
York, and 9 Liberty Square, Boston.

4t 12 **WM. BAILEY LANG.**

## Notice to Contractors.

SEALED PROPOSALS will be received at the  
Engineer's office of the Cleveland and Pitts-  
burgh Railroad Company, in Wellsville, from the  
first to the tenth of May next, for the gradation  
and masonry of thirty-nine miles of the Wheeling  
extension of the Cleveland and Pittsburgh Railroad,  
from the mouth of Yellow Creek to Bridgeport,  
opposite Wheeling.

Plans, profiles and specifications will be exhibit-  
ed and all requisite information given at the office  
of the Company, in Wellsville.

By order of the Board of Directors.  
**C. PRENTISS, President.**  
**J. LINTON, Chief Engineer.**

Office of the C. & P. R. R.,  
Cleveland, April 8th, 1853.



### Brass Tubes for Locomotive & Marine Boilers.

THE undersigned, having been appointed agent for the highly respectable manufacturers, Messrs. Allen, Everett & Son, of Birmingham, is prepared to take orders at fixed prices, for Brass Tubes of all diameters for Marine and Locomotive Engines. These Tubes are found to answer well, and are now in most general use in England, they last much longer than iron, and when worn out, realize about half the amount for old metal. For further particulars and inspection of patterns, please apply to

March 2d, 1853.

JOHN H. HICKS,  
90 Beaver st.

### Railroad Iron.

THE undersigned, Agent for the Manufacturers, is prepared to contract for T Rails, of the usual pattern and weights, to be delivered on board ship in Wales.

He will also receive and forward orders for the purchase of Railroad Iron and Metals generally, through the medium of his friends in London.

For terms, apply to

JOHN H. HICKS,  
April 1, 1853. 90 Beaver st.

## O. A. NORRIS,

**American Railway Agency,**  
FOR THE PURCHASE, ON COMMISSION, OF  
ALL ARTICLES REQUIRED BY  
RAILROAD COMPANIES.

Office, 12 Farquhar Buildings,

## Philadelphia.

## Engineering.

THE undersigned is prepared to furnish Specifications, Estimates and Plans, in general or detail, of Steamships, Steamboats, Propellers, High and Low Pressure Engines, Boilers, Mill Work, etc., etc. Particular attention given to the procuring and superintending of Locomotives, Tenders, Cars, and Railway Machinery of every description.

General Agent Ashcroft's Steam Gauge, Allen & Noyes' Metallic Self-adjusting Conical Packing, Dudgeon's Hydraulic Jack, Sewall's Salinometers, etc., etc., etc.

Acts as Agent for the purchase or sale of, and has always on hand, Steamers, Locomotives, Engines, Boilers, Machinery, etc.

CHAS. W. COPELAND,  
Consulting Engineer,  
64 Broadway, N. Y.

1y17

### Charles W. Copeland,

Steam Marine and Railway Engineer,  
64 Broadway, New York.

### Notice to Contractors.

PROPOSALS will be received at the Office of the Fort Wayne and Chicago Railroad Company in FORT WAYNE, until noon on Friday, the 20th of May next, for the Bridging, Grading, and delivering of Cross-ties for said Road.

PLANS, PROFILES and SPECIFICATIONS will be exhibited at the Office three weeks prior to the day of letting.

This line, One Hundred and Fifty miles long, embraces much heavy work, is well suited for prosecution in winter, and is divided into sections of from one to six miles in length, and may be bid for singly, or for the entire work.

J. R. STRAUGHAN,  
Chief Engineer.

### To Railroad Co's, Locomotive Builders and Engineers.

THE undersigned having taken the Agency of Ashcroft's Steam Gauge, would recommend their adoption by those interested. They have been extensively used on Railroads, Steamers and Stationary Boilers, where, from their accuracy, simplicity, and non-liability to derangement, they have given perfect satisfaction. In fact, for Locomotives, they are the only reliable Gauge yet introduced.

CHAS. W. COPELAND,  
Consulting Engineer, 64 Broadway.

### Hoole, Staniforth & Co., MINERVA WORKS,

SHEFFIELD,  
Steel Converters and Refiners;  
Manufacturers of Improved Cast Steel Engineering and Machine Files;  
Locomotive Engine, Railway Carriage and Wagon Springs.

Saws of every description, Engineers' Hammers, etc., etc., etc.

An assortment of Steel from the above Works constantly on hand by RICHARD MAKIN,  
Agent for the Manufacturers,

43

24 Broadway.

### Pease & Murphy,

**FULTON IRON WORKS,**  
FOOT of Cherry st., E. R. Office, 27 Corlears,  
corner of Cherry st. Manufacturers of Land and Marine Engines.  
N. B. - Engines and Boilers repaired. 6tf

### Notice.

LITHOGRAPHY.—The Court having granted the petition of the undersigned for a dissolution of his partnership with ALPHONSE BRETT, trading under the firm of A. BRETT & CO., Lithographers, Philadelphia, and having removed from Goldsmith's Hall to that convenient business stand, the new Girard building, No. 50 South Third Street, he would therefore beg leave to inform his friends and the public, that he is prepared to execute lithography in all its branches, in a superior manner. Having the best artists and workmen employed, he can freely warrant his work as equal to any in the trade.

Publishers, civil engineers, machinists, and others requiring lithographs, plain or in colors, can depend on the correctness and high finish of their designs, along with promptness and despatch.

DAVID CHILLAS,

Ap1 1m 50 South Third street.

### Trautwine on R. R. Curves.

By JOHN C. TRAUTWINE, Civil Engineer,  
Philadelphia, Pa.

JUST published, accompanied by a Table of Natural Sines and Tangents to single minutes, by means of which all the necessary calculations may be performed in the field.

This little volume is intended as a field-book for assistants; and will be found extremely useful, as it contains full instructions, (with wood cuts) for laying out, and adjusting curves; with Tables of Angles, Ordinates, etc., for Curves varying from 13 miles, down to 146 feet Radius.

A portable Table of Natural Sines and Tangents to minutes, has for a long time been a desideratum among Engineers, independently of its use in laying out curves.

The volume is neatly got up in duodecimo; and handsomely bound in pocket-book form.

Sold by Wm. Hamilton, Actuary of the Franklin Institute, Philadelphia. Price \$1.

Also, "Trautwine's Method of Calculating Excavation and Embankment."

By this method, which is entirely new, (being now made known for the first time) the cubic contents are ascertained with great ease, and rapidly, by means of diagrams, and tables of level cuttings. Thin octavo; neatly half bound, \$1. For sale by Wm. Hamilton.

June 28, 1851.

### To Railroad Companies, Car Builders, Machinists, etc.

SINGER, HARTMAN & CO.,  
SHEFFIELD IRON AND STEEL WORKS,  
PITTSBURG, PA.

Warehouse Nos. 109 Water, and 140 Front sts.

HAVING completed their arrangements for manufacturing Car and Locomotive Axles, Piston Rods, Wrought Iron Shafting, etc., either hammered or rolled, are prepared to offer inducements as to quality and price. They also manufacture

Boiler Plate and Rivets,  
Railroad and Boat Spikes,  
Car and Locomotive Springs,  
" " Spring Steel,  
Solid Box Vices, etc., etc.

15:7\*

### Fulton Car Manufactory, CINCINNATI, OHIO.

GEORGE KECK would respectfully call the attention of Railroad Companies in the West and South to his establishment at Cincinnati. His facilities for manufacturing are extensive, and the means of transportation to different points speedy and economical. He is prepared to execute to order, on short notice, Eight-wheeled Passenger Cars of the most superior description. Open and Covered Freight Cars, Four or Eight-wheel Crank and Lever Hand Cars, Trucks, Wheels and Axles, and Railroad Work generally.

Cincinnati, Ohio, February 9, 1853.

### Etna Safety Fuse.

THIS superior article for igniting the charge in wet or dry blasting, made with DUPONT'S best powder, is kept for sale at the office and depot of

REYNOLDS & BROTHER,

No. 85 Liberty St.

NEW YORK.

And in the principal cities and towns in the U. States. The Premium of the AMERICAN INSTITUTE was awarded to the Etna Safety Fuse at the late Fair held in this city. November 3, 1849.

### Gerard Ralston,

21 TOKEN HOUSE YARD, LONDON,

OFFERS HIS SERVICES FOR THE

**PURCHASE AND SALE OF  
AMERICAN SECURITIES,**

COLLECTION OF DIVIDENDS,

DEBTS, LEGACIES, ETC.,

And for the Purchase and Inspection of  
**Railroad Iron, Chairs, or**  
any kind of Machinery.

### REFERENCES:

Messrs Palmer, McKillop, Dent & Co., London.  
" George Peabody & Co, London.  
" Curtis, Bouve & Co, Boston.  
Richard Irvin, Esq., New York.  
Robert Ralston, Esq., Philadelphia.  
C. C. Jamieson, Esq., Baltimore.

38

### Virginia Locomotive and Car Works.

Wolfe Street and River Potomac, Alexandria, Va  
**SMITH & PERKINS, Proprietors.**

### MANUFACTURE

Locomotive Engines and Tenders.  
Marine and Stationary Engines and Boilers.  
Chilled Car Wheels and Axles.  
Patent Chilled and Wrought Slip-tire.

Machinery and Castings generally.  
The undersigned having erected very extensive shops, and procured the most modern machinery and tools, are prepared to execute orders for Locomotive Engines, Cars, and Machinery of all kinds, with despatch, and on the most favorable terms.

R. C. SMITH,

La 110f the Alexandria Iron Works.

THATCHER PERKINS,

Late Master of Machinery on the Balt. & O. R.R.

July 22 1851

### CAUTION.

### India-rubber Car Springs.

AN advertisement having lately appeared in the public papers, signed H. H. Day, claiming to have received from the American Institute, the premium for the best India-rubber Car Spring, the subscribers think it well for the satisfaction of their friends and those interested, as well as for the purpose of exposing false statements, to publish the following Diploma, lately awarded to F. M. RAY, the inventor of the Spring. The original of which can be seen at the office of the company, No. 104 Broadway, New York.

DIPLOMA—Awarded by the American Institute to F. M. RAY, for the best India-rubber Car Spring. A Gold Medal having been before awarded.

Signed, JAMES TALLMADGE,

President.

N. MEIGS, Recording Sec'y.  
ADONIRAM CRANDLER, Cor'g. Sec'y.  
New York, Oct., 1851.  
New England Car Spring Co., No. 104 Broadway  
New York.



## PATENT Locomotive Steam Cylinder BORING MACHINE AND FOR OTHER PURPOSES.

THIS Machine enables the Cylinders to be re-bored without moving them from their places, thereby saving a great expense. We refer to Nashua & Lowell, Fall River, Vt. Valley, Vt. and Mass., Old Colony, New York and New Haven, Providence, Hartford and Fishkill, Western, Mass., New York and Erie, Boston and Worcester, Connecticut River, Worcester and Providence, Champlain and St. Lawrence, Boston and Maine and Hudson River Railroads, who have the Machines in use.

For sale by  
**BRIDGES & BROTHER, Agts.,**  
64 Courtland St. New York.

January 20, 1853.

### Notice to Contractors.

**SEALED PROPOSALS** will be received at the office of the Clinton line railroad company, in Hudson, Ohio, until the 20th day of May next, for the grading, masonry, bridging and superstructure of their entire road, from Hudson to the Pennsylvania state line.

Plans, profiles, and specifications will be exhibited, and all requisite information given, at the office of the company, in Hudson, on and after the 10th day of May next.

By order of the board of directors.

H. N. DAY, president.

W. B. BEINSMAD, engineer.

Hudson, March 29, 1853.

## Toledo, Norwalk and Cleveland Railroad.

**OPEN** through, completing the last link in the chain of Railroads between New York, Boston, Philadelphia, Baltimore and Washington City and Chicago.

The only route by which the dangers of Lake Navigation are entirely avoided.

The quickest and best route between New York, Boston and Philadelphia and St. Louis.

On and after Monday, April 11, 1853, Passenger Trains will run daily (Sundays excepted) as follows:

### THROUGH TRAINS.

Leave Toledo at 8.00 A. M. and 10.00 P. M.  
Leave Cleveland, 9.20 A. M. and 8.30 P. M.

### BELLEVUE TRAINS.

Leave Norwalk for Bellevue at 8 A. M.  
Leave Bellevue for Cleveland at 2 P. M.

Night Trains will not stop at Towanda, Camden or Clyde, except to leave Passengers.

### CONNECTING DIRECTLY

**AT TOLEDO**—With Trains of Michigan Southern Railroad for Chicago and the West, and forming a line in connection with the Chicago and Rock Island Railroad and Steamers on Illinois River, to St. Louis.

**AT BELLEVUE**—With Trains of Mad River and Lake Erie Road for Sandusky City, Dayton, Cincinnati, etc.

**AT MONROEVILLE**—With Sandusky, Mansfield and Newark Railroad, for Sandusky City, Shelby Junction, Columbus Newark and Zanesville.

**T. GRAFTON**—With Cleveland, Columbus and Cincinnati road, for Cleveland, Shelby Junction, Columbus and Cincinnati.

**T. CLEVELAND**—With Lake Shore Road, for Pittsburgh, Wheeling, Philadelphia, Baltimore and Washington City.

Freight forwarded promptly at fair rates.

E. B. PHILLIPS, Sup't.

Superintendent's Office T. N. & C. R.R.,  
Norwalk, O., April 8, 1853.

### Notice to Contractors.

## HANNIBAL AND ST. JOSEPH RAILROAD.

**SEALED PROPOSALS** will be received at the office of the undersigned, in the city of Hannibal, Missouri, until the twentieth day of April, for the graduation, masonry and bridging of 25 miles of said road, extending west from Hannibal.

Proposals will also be received at our office, in the city of St. Joseph, Missouri, until the tenth day of May, for the graduation, masonry and bridging of 25 miles additional, extending east from St. Joseph. The remainder of the line, extending a distance of over 150 miles, will be placed under contract as soon as the same can be prepared by the engineers.

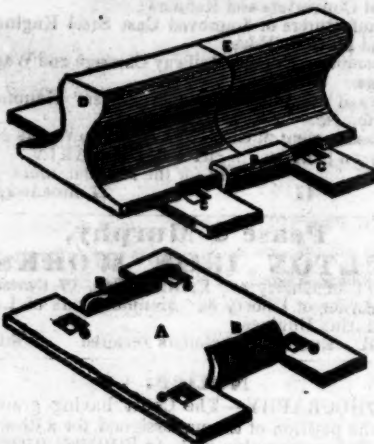
This line embraces some very heavy excavations and embankments, and several large bridges.

Plans, profiles and specifications will be ready at each place one week previous to the letting.

**DUFF & LEARNED**

Contractors H. and St. J. RR.

## The American Railroad Chair Manufacturing Co. IN POUGHKEEPSIE, N. Y.,



**ARE** prepared to make **WROUGHT IRON RAIL ROAD CHAIRS**, of various sizes, at short notice.

By use of the **WROUGHT IRON CHAIR**, the necessity of the wedge is entirely done away—the lips of the chair being set, by means of a sledge or hammer, close and firmly to the flange of the rail.

The less thickness of metal necessary in the Wrought Iron Chair gives much greater power and force to the spikes when driven—and consequently a much less liability to the spreading of the rails by reason of the spikes drawing or becoming bent.

The less weight necessary in the Wrought Iron Chair, will enable us to furnish them at a cost much below that of **CAST IRON CHAIRS**.

Our Chairs are made from Ulster Iron, the quality of which is well known. Our Chairs are made by machinery, and formed over a die, consequently all are uniform and alike.

Our Chairs are in use on the following Roads, viz:

Syracuse and Utica, Chester Valley, Penn.,  
Buffalo and Rochester, Tioga,  
Northern, Norwich and Worcester,  
Montreal and New York, Kings Mountain, S. C.,  
Kenbec and Portland, Columbia and Granville,  
Plattsburg and Montreal, Buffalo, Bayou Brazos and  
Chicago and Rock Island, Colorado, Texas,  
Milwaukee and Miss., Panama, and others.

For further information address,

**N. C. TROWBRIDGE, Secretary,**  
Poughkeepsie, N. Y.

January 1, 1853.

## RAILROAD IRON.

**THE** undersigned, from their long engagements with the Manufacturers of G. L. Iron, feeling themselves eminently qualified to assist Railway Companies in America, and Gentlemen proceeding to England for the purpose of purchasing Railroad or other Iron, tender their services free of any charge, and invite communications either personal or by letter.

Address **JOHN H. AUSTIN & CO.,**

March 2, 1852. 2 Ingram Court, Fenchurch Street, LONDON.

## R. GROVES & SONS, SHEFFIELD, ENGLAND, Manufacturers of

**WARRANTED** Cast Steel of superior quality for Tools, Machinery and Engineering purposes. Single and Double Shear, Billet, German, Spring and Sheet Steel of every description; also, Cast Steel Files of high reputation, specially adapted for the use of Machinists, and Saws and Edge Tools of all kinds.

Corporate mark



**CHAS. CONGRUVE, Agent,**  
55 Maiden-lane, New York.

Stocks of the above goods constantly on hand.  
January 12, 1852.

### Railroad Iron.

**5000** TONS Best Staffordshire Rails for sale on early delivery in Liverpool

**NAYLOR & CO.,**

124 99 John street,

**STIMON DRAPER, No. 48 Pine-st.,** offers for sale, a variety of **RAILROAD BONDS AND STOCKS**; also **CITY, TOWN and COUNTY BONDS**, among which are—

1st Mortgage Convertible Bonds:

**Payable in**  
7 per ct.—Buffalo, Corning and New York R. R. . . . . New York, 1867  
7 per ct.—Western Vermont R. R. . . . . " 1861-71  
7 per ct.—Columbus, Piqua and Indiana. . . . . " 1862  
7 per ct.—Oatawissa, Williamsport and Erie. . . . . " 1867  
8 per ct.—Peoria and Oquawka. . . . . " 1863  
6 per ct.—Maysville and Lexington. . . . . " 1870  
6 per ct.—Dauphin and Susquehanna Coal Co. . . . . " 1877

1st Mortgage Bonds:

7 per ct.—Corning & Blossburg. . . . . " 1878  
7 per ct.—Buffalo and New York City. . . . . " 1866  
7 per ct.—Mansfield and Sandusky. . . . . " 1860  
7 per ct.—Toledo, Norwalk and Cleveland. . . . . " 1861  
7 per ct.—Vermont Valley. . . . . " 1861  
7 per ct.—New Jersey Central. . . . . " 1860-70  
7 per ct.—Brunswick Canal Co. . . . . " 1867  
7 per ct.—Troy and Bennington. . . . . Troy, N.Y. 1862

Also, second Mortgage bonds of many of the above companies, and—

7 per ct.—Saratoga and Washington R. R. New York, 1862  
7 per ct.—Troy and Boston. . . . . " 1864  
7 per ct.—Muscoogee Railroad. . . . . Savannah, 1862  
7 per ct.—Huron and Oxford. . . . . New York, 1862  
10 per ct.—Mansfield and Sandusky R. R. Co. . . . . " 1866-67  
7 per ct.—Township of Portland, Ohio. . . . . " 1862  
7 per ct.—City of Dayton, Ohio, guaranteed by Mad River R. R. . . . . " 1861

10 per ct.—City of Keokuk, Iowa. . . . . Keokuk, 1863

7 per ct.—Town of Huron, Erie county, Ohio. . . . . Huron, 1861

7 per ct.—Town of Newark, O. . . . . New York, 1860

7 per ct.—City of Sandusky, convertible into Junction R. R. Stock. . . . . " 1866

7 per ct.—State of California. . . . . " 1862-72

7 per ct.—Mortgage bonds of the Atlantic Steamship Co. . . . . " 1865

12 per ct.—Improvement Scrip of the State of Wisconsin for improvement of Fox River. . . . . " 1862

Rutland and Whitehall Stock, with guarantee of 7 per cent. dividend by Saratoga and Washington Railroad.

Stock in the Western Vermont R. R. Co.

Stock in the Mad River R. R. Co.

Stock in the Buffalo, Corning and New York R. R. Co.

Stock in the Mansfield and Sandusky R. R. Co.

Stock in the New York and Virginia Mail Steamship Company, paying 20 per cent. dividends.

## The Cold Spring Iron Works INCORPORATED IN 1848.

**IN** the Town of Otis, County Berkshire, Massachusetts, manufactures **CAR AXLES**, and all kinds of **WROUGHT IRON** used in the manufacture of **LOCOMOTIVES** and **CARS**; also, **BAR IRON** of all descriptions. Particular attention is paid to the manufacture of **CAR AXLES**, and the Works being situated in a region of **WOOD** and **CHARCOAL**, with which their Axles are exclusively made, the Company feel confident they can furnish an article equal, if not superior, in quality and finish to any in the market. They solicit the orders of **RAILROAD CORPORATIONS** and **CAR BUILDERS**, and promise they shall be promptly attended to: and executed on terms as advantageous as can be had elsewhere.

They refer to—  
**John Kinsman, Esq.,** Superintendent Eastern Railroad, Salem, Mass.

**A. T. Peirce, Esq.,** Car Builder, Norwich, Conn.

**E. T. Osborn, Esq.,** Superintendent of the Mad River and Lake Erie Railroad, Sandusky City, Ohio.

**W. W. Wetherell, Car Builder,**

Address **HENRY MELLUS, Agent,**

Boston, Mass.

or, **GEO. W. PRESCOTT, Sup't,**

Otis, Mass.

November 12, 1852.

## Anthracite and Charcoal Pig Iron.

800 Tons No. 1 Glendon Anthracite Pig Iron.

1000 " No. 2 " " " "

1000 " Forge " " " "

200 " No. 1 Stockbridge Charcoal " "

100 " No. 2 " " " "

500 " Forge Katahdin " " "

For sale by

**GEORGE W. A. WILLIAMS,**

5 Liberty Square, Boston.

December 11, 1852. 3m

### FOR SALE.

**TWO** Sixty Horse Power Beam Engines, with eight boilers, suitable for Blast Furnace, Pumping, or Mining; formerly used by the State of Pennsylvania on the Schuylkill Inclined Plane, near Philadelphia, (where they may now be seen.)

Apply to **A. & P. ROBERTS,**  
No. 50½ Walnut Street, Philadelphia.



**Notice to Contractors.**

OFFICE N. O., OPELOUSAS & GREAT  
WESTERN RAILROAD CO.,  
New Orleans, March 5th, 1853.

**SEALED PROPOSALS** will be received at this office, until the 10th of May next, for the construction of that portion of the road between Bayou Lafourche and Berwick's Bay, a distance of 31 miles; also from Berwick's Bay to Washington, 92 miles, including a branch road of 18 miles. Proposals will be made for the entire completion of the road, (except furnishing iron.)

References of ability, and security, will be required.

Plans and specifications of the work to be seen at this office, after the 10th of April.

JAMES G. GIBBES, Chief Engineer.

**Alton, Mt. Carmel and New Albany Railroad.**

**NOTICE** is hereby given, that there are no Bonds of this company in circulation, as the books of this company will testify that no bonds have ever been issued or authorized.

And, as all the stock formerly subscribed on the books of this company was, on the 4th and 18th of December, 1852, sold by the sheriff, under executions issuing from the Circuit Court of Edwards county, Illinois, and was by the purchasers at such sales, or by their assignees, surrendered to the present board of directors, on the 29th of January, 1853: All Certificates of Stock bearing date previous to that time are worthless.

It having been reported, that bonds and certificates of stock of this company have been offered for sale or pledge by parties formerly connected with this company, the board have thought it right thus to put the public on their guard.

F. B. THOMPSON,

Pres't. Mt. C. & N. A. R.R. Co.

SAMUEL THOMPSON, M. D.,

Sec'y to the Board.

March 7th, 1853.

1m12

**To Contractors.****LA CROSSE AND MILWAUKEE RAILROAD.**

Proposals will be received at the office of the Engineer of this road, in the city of Milwaukee, upon the 10th day of May next, for the Grading, Bridging, Superstructure, Station House, Water Stations and equipments of the first division of the La Crosse and Milwaukee Railroad, extending from the city of Milwaukee to Portage City, on the Wisconsin River.

Propositions will also be considered for the grading in sections, and for the superstructure and buildings, separately.

By order of the Board,

J. L. BEAN, President.

Milwaukee, April 6th, 1853.

**Notice to Contractors.**

Mississippi and Atlantic Railroad, from Terre Haute to St. Louis Letting.—Sealed proposals, will be received at the office of the Company, either at Terre Haute, Indiana, or Marshall, Illinois, until and on the 15th day of May, 1853, at sundown, for the grading and masonry from Terre Haute, Indiana, to Pocahontas, Illinois, (124 miles) and for the bridge across the Wabash River.

Propositions will also be received until and on the 15th day of June, 1853, at sundown, at either of the above named offices, for the grading and masonry from Pocahontas to Caseyville, (30 miles.)

Proposals will be preferred for sections not less than one nor more than three miles, but will be received and considered for sections of ten, fifteen and twenty miles.

The Company reserves the right to accept of such proposals as in their judgment will best secure the prompt construction of the road, and to reject any and all propositions as they may think proper.

Profiles and specifications can be seen at the office in Terre Haute for two weeks previous to the letting.

JOHN BROUGH, President.

S. DWIGHT EATON, Engineer.

Terre Haute, Ind., March 1, 1853.

**CAR, LOCOMOTIVE, AND TENDER SPRING MANUFACTORY.**

PHILADELPHIA, March 1, 1852.

We beg leave to present the following Certificates to the consideration of **Railroad Companies and Car Builders**, for the quality of **CAR, LOCOMOTIVE, AND TENDER SPRINGS** manufactured by us.

At the same time we would inform Railroad Companies and Car Builders that we have extended our works, and will be happy to execute any orders for Steel Springs for Cars, Locomotives, or Tenders, of any design or pattern which they may see proper to intrust to us, at the lowest prices, and on terms which will prove satisfactory.

From our long experience as Spring manufacturers, we are enabled to supply Railroad Companies with **Spring Steel**, of superior quality, converted from **Swede Steel Iron**.

The iron being imported direct from Stockholm by ourselves, and Converted and Rolled under our supervision.

Yours respectfully,

**JAMES JEFFRIES & SON,**  
REAR OF GIBBARD HOUSE.

Phila'da, Feb. 27, 1852.

Messrs. JAMES JEFFRIES & SON,

Gentlemen: In reply to your inquiries as to the character of the Springs furnished by you for Locomotive Engines and Tenders, I take pleasure in saying that I have found them, both in material and workmanship, superior to anything else of the kind that ever came under my notice. I have occasionally tried the Springs of other manufacturers, but in testing their elasticity and strength with the apparatus I have for that purpose, I have found none combining the requisites of a good spring, viz., lightness, elasticity, and durability, in so eminent a degree as yours.

I am using them exclusively under the Engines and Tenders of my make, and can safely recommend them to others.

Yours truly, M. W. BALDWIN.

Office, Penn's Rail Road Co.

Phila'da, Feb. 28, 1852.

This is to certify, that James Jeffries & Son manufactured nearly all of the Steel Springs used on the Georgia Rail Road while I had charge of that work, and have also furnished those that have been used on the Pennsylvania Rail Road. The character of their work has always given entire satisfaction, and I cheerfully recommend their Springs to the patronage of Rail Road Companies and Car Builders.

J. EDGAR THOMSON,

Chief Engineer and President Penn's Rail Road Co.

Office, Phila, Germantown & Norristown R. R. Co.

February 28, 1852.

This is to certify, that I have used the Steel Springs manufactured by Messrs. Jas. Jeffries and Son, for the Locomotives, Passenger, and Freight Cars of the above Road, during the last 13 years, and have always found them good and efficient Springs, giving general satisfaction.

Philadelphia, Feb. 23, 1852.

This is to certify, that we have used Car Springs made by James Jeffries & Son, for the period of twelve years, and find them a very superior article, so much so, that we shall always continue to use them.

DUTILE, HUMPHREYS & CO.

Proprietors of Union Line of Trans. from Phila to Pittsburg

Philadelphia, Feb. 27, 1852.

Messrs. J. JEFFRIES & SON,

Gentlemen: We have been using your Steel Springs under our Cars for a number of years, they have given entire satisfaction, and have proved themselves superior to any other that we have used. Their good qualities should commend them to any who have need of an article so difficult to obtain perfect.

Yours truly, HARRIS & LEECH,

Proprietors of Leach's Trans. Line from Phila to Pittsburg.

Richmond, Jan. 6, 1852.

Messrs. JEFFRIES & SON: It affords me pleasure to say, that after some six or seven years' trial of your Springs, I find them superior to any other Springs we have used on our road, and are so well satisfied with their merits as to continue the use of them.

I am, very respectfully yours,

THOMAS SHARP,

Superintendent R. P. & P. R. R.

Office, R. & P. R. R. Co.

Richmond, Va., Jan. 4, 1852.

To Mr. THOMAS JEFFRIES,

Dear Sir: I take pleasure in stating that the Springs made by the firm of which you are a member, and which I have been using for the last eight years on Locomotives and Tenders, and, also, on Passenger, Freight, and Coal Cars, have given the utmost satisfaction, and I consider them superior to any I have received from other establishments during the above period, and shall still continue to send you our orders for all we may want.

Very respectfully yours,

THOMAS DODAMEAD,

Superintendent R. & P. R. R.

Superintendent's Office, C. & E. R.

Savannah, Ga., Jan. 31, 1852.

This will certify, that Car and Locomotive Springs made by Messrs. James Jeffries & Son, of Philadelphia, have been in use on this road for a number of years, and have given entire satisfaction.

W. M. WADLEY,

Superintendent.

Office, Pensburg R. R. Co.

Pensburg, Jan. 2, 1852.

The house of James Jeffries & Son, of Philadelphia, has made us a good many Car and Engine Springs, and I take great pleasure in stating that they have always turned out well, and I believe their work can not be surpassed by any in the country.

H. D. BIRD,

President.

Office, Sup't T. & M. Power, So. Ca. R. R. Co.

Charleston, Jan. 21, 1852.

This is to certify, that the South Carolina Rail Road Company have for a number of years been using the Steel Springs manufactured by Messrs. J. Jeffries & Son, of Philadelphia, for their Locomotive Engines, and for both Passenger and Freight Cars, and I take pleasure in stating that they have given entire satisfaction, and recommend them to the patronage of all Rail Road Companies requiring such articles.

J. D. PETCH,

Sup't Trans. & Motive Power So. Ca. R. R. Co.

Philadelphia, Feb. 27, 1852.

This is to certify, that I have used Springs made by James Jeffries & Son for the period of five years, and consider them equal, if not superior to any others that I have had in use.

JOSEPH S. LEWIS,

Pennsylvania & Ohio Line.

Georgia Rail Road,

Augusta, Ga., Jan. 1, 1852.

To whom it may concern.—We have used Springs manufactured by Messrs. James Jeffries and Son, for the Locomotives and Cars of our road for the last ten years, and have no hesitation in recommending them as having given general satisfaction.

F. C. ARMS,

General Superintendent.

Macon & Western Rail Road,

Macon, Ga., Jan. 25, 1852.

Messrs. J. JEFFRIES & SON,

Gentlemen: This Company has for several years purchased and used, under Cars and Engines, Steel Springs manufactured by you. We have also purchased from other manufacturers and made Springs ourselves.

Yours have given entire satisfaction, and have proved themselves equal, if not superior to any we have used. Their excellent qualities should commend them to all who have need of an article so difficult to obtain in perfection.

Yours, very respectfully, EMERSON FOOTE,

Superintendent.

Macon, Ga., January 24, 1852.

Messrs. JAMES JEFFRIES & SON,

Gentlemen: In reply to your inquiries in reference to Steel Springs, I take pleasure in saying, that I have been in the way of observing Springs in use on Cars and Locomotives, on various Rail Roads, for seventeen years past, more particularly on the Central Rail Road of Georgia for eight years past, and during said seventeen years have been practically acquainted with your make of Springs, and I have no hesitation in saying, that your Springs with open work are the best Steel Springs I have ever used or seen in use.

Yours, respectfully, GEO. W. ADAMS,

Superintendent S. W. R. R. of Georgia.

Transit Office, N. & A. R. R.

Atlantic, Jan. 31, 1852.

Messrs. JAMES JEFFRIES & SON,

Gentlemen: This road has used the Springs made by your firm since its first opening, under both Engine and Cars, and they have given entire satisfaction to all.

Very respectfully, WM. D. FULTON,

Superintendent.

Montgomery & West Point R. R. Co.

Montgomery, Ala., Feb. 23, 1852.

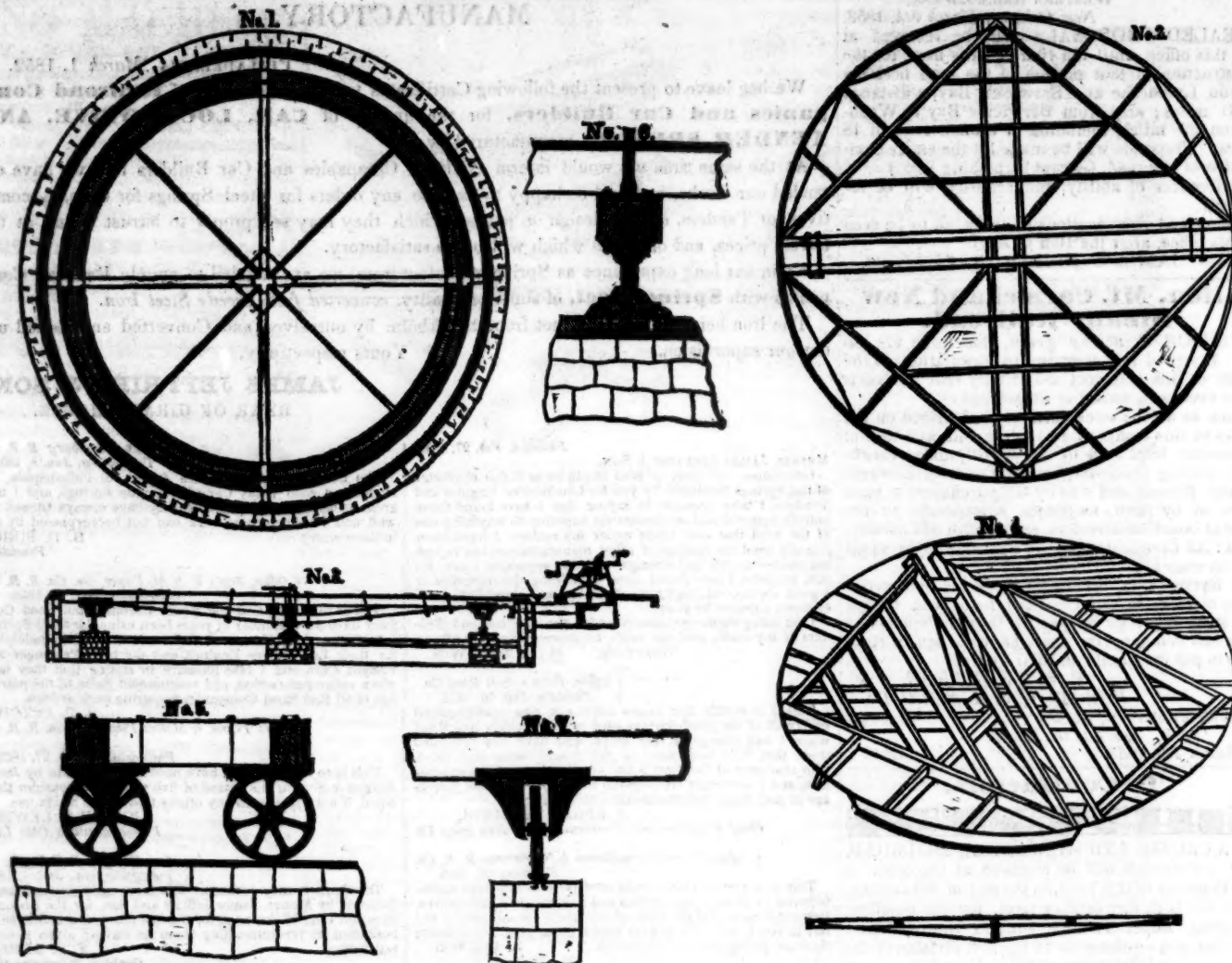
This may certify, that this Company have been for years using, both under their Engines and Cars, Springs from the manufactory of James Jeffries & Son, of Philadelphia, and are so well satisfied of their superiority that we can confidently recommend them to all companies in need of Springs.

SAMUEL G. JONES,

Engineer and Superintendent.



# CARHART'S IMPROVED TURNTABLE!



**THIS TURNTABLE**, together with an Engine and Tender of 30 tons weight, is capable of being turned by **ONE MAN** in **25 SECONDS**.

The Patentee of this Improved Table would solicit an examination by those Railroad Companies which have not tried its merits. It is guaranteed to be the cheapest and most durable one now in use; its simplicity rendering it impossible to get out of repair, unless it is placed upon treacherous foundations. The whole cost, ready for use, was formerly \$1,300 apiece; this included all the workmanship and materials, which were the best that could be furnished, with the exception of excavating the pit and furnishing the rail for the tracks. At the present time, owing to the rise in iron, and the scarcity of stone at some points, the subscriber is compelled to ask a small advance on the above mentioned price. Should it suit the pleasure of any to confer with the subscriber for further particulars,

or inquire into the practical utility of the Table as tested for the last four years, they are respectfully referred to the

Hudson River R. R. Co.,  
S. W. Roberts, Esq., Chief Engineer of the Ohio and Penn. R. R., at Pittsburgh, Pa.  
O. Barnes, Esq., Resident Engineer of the Central Pennsylvania R. R., Pittsburgh, Pa.  
J. Durand, Esq., Sup't of Cleveland and Pittsburgh R. R.

Wm. E. Ferguson, Esq., Chief Engineer of Toledo, Norwalk and Cleveland R. R., Cleveland, O.  
A. J. Conover, Esq., Chief Engineer of Columbus, Piqua and Indiana R. R., at Piqua, O.

Fig. 1, of the above cut, represents the Foundations, consisting of the Bank and Track Walls, the latter made of cut, and the former of hammer-dressed stone, with a cut coping. The Track is spiked and leaded to the stone wall, and cut perfectly level

and smooth. The centre pier is of stone, with a step for the screw and pivot bolted to the same.

Fig. 2, shows the Carcase Framing.

Fig. 3, is a side view of one Main Truss, with the mode of gearing, including the mitre-wheels, and iron crank frame, rack and pinion.

Fig. 4, gives a perspective view of the rim, segments, decking, etc.

Fig. 5, is an end view of the main trucks, with pedestals and wheels.

Fig. 6, is the screw for the pivot, 6 inches in diameter, working in a steel step through a nut for adjustment.

Fig. 7, shows a cross section of the track wall, well and pedestal.

For further particulars, please address  
**D. M. CARHART,**  
Cleveland, Ohio.

February 14, 1853.

## LOW MOOR AXLES.

A SUPERIOR Article for Railroad Cars, supplied by the Manufacturers' Agent—WM. BAILEY LANG, 9 Liberty Square, Boston, and 24 Broadway, New York.

### CAUTION.

RAILROAD Companies, and the public generally, are hereby cautioned against purchasing Richardson's Patent Oil Cups, or the right to use the same, except of the undersigned, Proprietor of the Patent, or of some one acting under his authority. Communications addressed to him at Westminster, Vt., will be promptly attended to.  
Oct. 2, 1852. E. DWOLF, Jr.

## To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of Instruments for Field and Office use.  
Feb 9 1853. JAS. PRENTICE, 315 Broadway, N. Y.

### Oxford Furnace, N. J.

ESTABLISHED A. D. 1743.

THE Subscriber manufactures and keeps constantly on hand for sale, every variety and size of Railroad Wheels, made from the celebrated Oxford Iron. All orders addressed to CHAS. SCRANTON, Oxford Furnace P. O., will be attended to promptly.  
Sept. 11, 1852. ly\*

## IRON.

### Pierson & Co.,

24 BROADWAY, NEW YORK,

KEEP on hand a large and general assortment of ENGLISH and AMERICAN Refined, BAR, BOLT, SHEET and SHAFING IRON, especially manufactured for LOCOMOTIVE and CAR BUILDERS, and RAILROAD MACHINE SHOPS; also, Boiler Plates and Rivets, Sheet, Cast and Spring Steel.

Locomotive Cranks, Axles, Tires and Tire Bars, of the B. O. LOWMOOR, and other approved makes, imported to order on the most favorable terms.  
February 14, 1853.